

APR 9-



History of Sports

TENNIS

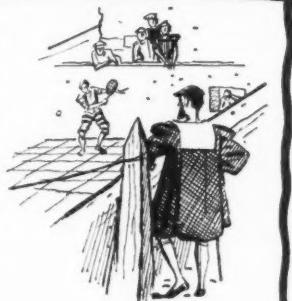


2 OUT OF 3 WEAR BIKE

1. Recognized leaders for years.
2. Scientifically designed to give proper fit, uniform pressure and support.
3. Built to maintain elasticity — give maximum wear, comfort and freedom from chafing.

One of the oldest of ball games

Although its origin cannot be accurately traced, authorities find an ancient derivation for tennis in Egypt, in Persia and among the Arabs before Charlemagne. In 1300 the game was known as "La boudé" and it was played in France throughout the century, frequently in some crude form in the moats of castles. Even at this time it was played and watched by kings and nobles.



Tennis—The Royal Game

The game today known in the United States as Court Tennis attained its greatest popularity in France and England in the 16th and 17th centuries. Though it has little similarity to our modern tennis it is the ancestor of the game we know today. It was played by Henry IV and Louis XIV of France and by many of the kings of England. Indeed, Henry VIII built a court at Hampton Court which is still in use today.



The Growth of Modern Tennis

Modern tennis began in England in about 1874 as a pleasant and rather mild lawn game. It achieved almost immediate popularity and developed swiftly with continual improvements in rules, equipment and methods of play. The volley, the lob, twist and cannon-ball serves have all become important parts of the game. And today tennis is one of the most popular ball games in the world, played by all civilized races.



As games have developed— so has equipment

● The success of every game—the health, skill and pleasure of every player are to a large extent dependent on the equipment used. Every coach and trainer knows this—and every coach and trainer knows that there is no single piece of equipment more important for all sports than a good athletic supporter. Don't take chances with just any supporter—insist on one you can count on for snug, lasting support, long wear and economy.

Depend on the supporter that's worn by 2 out of 3* athletes. When you order say Bike!

*Impartial survey, by A. C. Nielsen Co., shows 2 out of 3 athletes wear Bike.

APRIL, 1940



There's no excuse for dust when you can use

GULF SANI-SOIL-SET THE MODERN DUST ALLAYER

HERE'S an ideal product for dust allaying purposes on earth surfaces. Gulf Sani-Soil-Set —

another sensational development by Gulf's research technologists — offers a practical solution to the dust problem on playgrounds, tennis courts, athletic fields, parking lots, etc.

One application of Gulf Sani-Soil-Set per season will usually do the job. Properly applied, it will not track or harm shoes or clothing.

Don't let another season pass without getting the benefit of this inexpensive dust allayer.

*Write
for this booklet
for complete
Information*



GULF OIL CORPORATION

GULF REFINING COMPANY

GULF BUILDING • PITTSBURGH, PA.

GULF OIL CORPORATION • GULF REFINING COMPANY
Gulf Building, Pittsburgh, Pa.

Please send me without obligation a copy of the booklet "Gulf Sani-Soil-Set for Treating Playgrounds."

Name

Title

Address

FAMOUS COACHES AGREE THAT MERCERIZED COTTON IS BEST FOR ATHLETES



FOR FOOTBALL! Remember, all four 1940 Bowl winners wore "Durene" jerseys. "Jerseys made of mercerized cotton yarn are best for they keep the body cooler, more comfortable; they reduce danger of chills, colds, muscular stiffness and chafing," says Bill Alexander of Georgia Tech.



FOR BASEBALL! "Durene" jerseys are a hit for baseball. "For years our teams have worn jerseys of mercerized cotton and we are very much pleased with their service and durability," says J. H. Lever, Jr., trainer at Clemson College.



FOR BASKETBALL! "Durene" protects health of players. "Because jerseys of mercerized cotton absorb and evaporate perspiration quickly they protect against sudden chills and help avoid colds," says Howard Hobson of University of Oregon.



FOR ALL SPORTS! "Durene" is tops! "Mercerized cotton garments are best for tennis," says Carl Rohman, coach at University of Virginia. "Durene" garments are ideal for gym and track, for all outdoor and indoor sports. "Coaches welcome athletic goods that aid in preventing chills and colds," says Dan Mattheai of Bronxville High School. "Durene" jerseys have qualities that are essential to the health of athletes," says H. S. De Groat of Springfield College.



Durene
REG. U. S. PAT. OFF.

garments absorb and evaporate perspiration twice as fast as similar garments of unmercerized cotton.



WHEN YOU ORDER your football equipment this Spring be sure to specify "Durene" for jerseys, undershirts and socks.

DURENE ASSOCIATION OF AMERICA
470 FOURTH AVE., NEW YORK

**SCHOLASTIC
COACH**
Reg. U. S. Pat. Off.

IN THIS ISSUE VOL. 9, No. 8

HERE BELOW.....	7
FIRST PRACTICE—GROUND STROKES.....	9
By J. Donald Budge	
SCHOOLBOY CATCHER IN THE MAKING.....	12
By James L. Quigley	
A FAIR EXCHANGE WINS MANY A RACE.....	14
By Vincent Farrell	
TIMING THE BATTING SWING (Pictures).....	16
OUTGUESSING THE MAN WITH THE BAT.....	17
By Charles A. Jamieson	
STRETCHING FOR A THROW (Pictures).....	18
FINANCING EXTRA-CURRICULAR ACTIVITIES.	20
By Duke Thayer	
PUTTING, GOLF'S SIMPLEST SWING.....	22
By Ben Thomson	
OUTDOOR TRACK AND FIELD RECORDS.....	24
COMPETITIVE VOLLEYBALL PLAN.....	26
By Frank Colucci	
COMPLETE AND PARTIAL ROUND-ROBINS.....	32
By E. R. Elbel	
FROM THE STATES.....	36
SCHOLARSHIP AMONG ATHLETES.....	40
By Benjamin H. Culley	
COACHES' CORNER	42
Conducted by Bill Wood	
COACHING SCHOOL DIRECTORY.....	47
NEW BOOKS ON THE SPORTSHELF.....	50

Editor: OWEN REED
Advisory Editor: JACK LIPPERT
Assistant Editor: H. L. MASIN

SCHOLASTIC COACH is issued monthly ten times during the academic year (September through June) by Scholastic Corporation, M. R. Robinson, president. Publishers of *Scholastic*, the American High School Weekly; issued in two editions, one for students and one for teachers.

Address all editorial and advertising communications to SCHOLASTIC COACH, 250 E. 43rd Street, New York, N. Y.

G. Herbert McCracken, publisher; S. Z. Oppenheim, advertising manager; John T. Lindenberg, associate advertising manager; Pacific Coast Rep., E. S. Townsend, Russ Bldg., San Francisco, Calif.

Subscriptions for the United States and Canada, \$1.50 a year. Foreign \$2. Back issues: 25 cents, current volume: 50 cents, previous volumes. All correspondence concerning subscriptions and circulation should be addressed to Circulation Department, 430 Kinnard Ave., Dayton, Ohio.

The entire contents of SCHOLASTIC COACH copyright, 1940, by Scholastic Corporation.

EDITORIAL ADVISORY BOARD — C. W. WHITTEN, Secretary-Treasurer, National Federation of State High School Athletic Associations; ETHEL PERRIN, Vice-chairman of the Executive Committee, Women's Division National Amateur Athletic Federation; FLOYD A. ROWE, Directing Supervisor of Physical Welfare, Cleveland Public Schools; WILBUR DALZELL, Director of Athletics, Dubuque, Iowa, Senior High School; DANIEL CHASE, Sportsmanship Brotherhood; CHARLES S. DAVIS, retired Superintendent of Public Schools, Steelton, Penna.; L. L. FORSYTHE, Principal, Ann Arbor, Mich., High School; ROBERT H. HAGER, Supervisor of Physical Education, Tacoma, Wash., Public Schools; JAMES E. MANSFIELD, Athletic Director, Haverhill, Mass., High School; JAMES EDWARD ROGERS, Secretary National Physical Education Service of the National Recreation Association, and of the Department of School Health and Physical Education of the National Education Association; LEWIS W. SMITH, Superintendent, Berkeley, Calif., Public Schools; WALTER B. SPENCER, President, Connecticut Interscholastic Athletic Conference; E. R. STEVENS, President National Federation of State High School Athletic Associations; R. W. TRUSCOTT, Commissioner, Colorado High School Athletic Conference; W. H. YARDBROUGH, Principal Peabody Demonstration School, Nashville, Tenn.

SCHOLASTIC COACH is a member of the Controlled Circulation Audit, a bureau for examining and auditing circulation figures for the protection of advertisers. CCA statements of SCHOLASTIC COACH circulation supplied on request.

Through this service, SCHOLASTIC COACH advertisers receive incontrovertible evidence of the circulation they are paying for.

CCA



**Get Off to a Fast Start Mornings With This Nourishing
"Breakfast of Champions" So Many Great Athletes Eat!**

Here's your answer to a mighty important problem facing many coaches this time of year—how you can help your boys get more benefit and more enjoyment from the substantial training breakfast athletes need every day.

Get acquainted with this keen-tasting "Breakfast of Champions," the nourishing training dish that so many baseball champions and stars in many sports are eating these mornings.

It's a heaping bowlful of Wheaties, those crisp-toasted whole wheat flakes with the national champion flavor, and plenty of milk or cream and fruit. It's a tempting, satisfying meal that's designed to click with hearty appetites every time it comes on the table!

Try This Combination For Solid Nourishment

You'll notice that a "Breakfast of Champions" is a combination of three basic foods widely recommended for athletes in training—toasted whole wheat, milk and fruit. Each of these foods provides a variety of food elements athletes need. Together, they form a complete, well-rounded meal that's a true champion for nourishment.

It supplies important proteins for building and restoring body tissues. Those valuable minerals, calcium, phosphorus and iron. Vitamin A, essential to growth and maintenance of bodily condition. Vitamin B, for promoting good appetites. Vitamin C, which every athlete in training should get in

good amounts daily. And abundant food-energy, the "food-fuel" that's the largest single requirement in a balanced diet for boys engaged in strenuous physical exercise!

You can see why this "Breakfast of Champions" gets the approval of so many coaches interested in the welfare of growing athletes!

This Flavor Scores With Millions!

Wheaties give you the excellent nourishment of toasted whole wheat in a new, extra delicious form—big, crunchy flakes brimming with appetite appeal and pleasingly malt-flavored for added goodness.

This famous Wheaties flavor is bringing pleasure and satisfaction to millions of happy, hungry people, including those hundreds of champion athletes who enjoy Wheaties regularly.

So, starting right away, why not get Wheaties on your own morning schedule? Tell your boys about this nourishing "Breakfast of Champions" with the winning flavor. We're sure they will get more fun out of training, plus a lot of welcome nourishment, when they start the day this champion way.

Ask your grocer today for Wheaties—a product of General Mills.



Wheaties and advertising claims for them are accepted by the Council on Foods of the American Medical Association.

WHEATIES

WITH MILK OR CREAM AND SOME FRUIT

"Breakfast of Champions"



Wheaties and "Breakfast of Champions" are registered trademarks of General Mills, Inc.



*Your pool looks
clean and IS CLEAN
when you use this
pair of products...*

• Many of the most famous pools in the country are now keeping their tile looking beautiful, and both pool and water as clean as they look, by means of Perchloron and Tilite.

Perchloron, containing more than 70% available chlorine in convenient easy-to-use form, is efficient and economical for sanitizing the walls of a pool after washing, and for chlorination of the water itself. It helps control slime and algae growths. A Perchloron solution combats and controls athlete's foot when placed in shallow trays through which swimmers must step. Use it also as a disinfecting spray for locker rooms and wash rooms.

Perchloron keeps well and holds its strength. It is dustless, free-flowing

granular material packed in handy cans with airtight replaceable covers, 9 cans to the case.

Tilite paves the way for the safety of Perchloron by its efficient cleaning of mosaic, ceramic, and vitrified tile. It has a twofold chemical-mechanical cleaning action that cuts labor. It keeps a pool looking beautifully new, for it goes to work on imbedded dirt as well as surface dirt, and is designed to remove most types of stain and discoloration—including rust. Protects your large investment because it does not attack tile or grouting. Contains no soap to make a wet surface dangerously slippery. Tilite, like Perchloron, is economical to use. Packed in 50, 150, and 300 lb. drums.

Perchloron



FREE
SAMPLES—
MAIL THIS
COUPON

Pennsylvania Salt Manufacturing Company, Widener Building, Philadelphia, Pa.

Please send me free samples as checked at left.

Perchloron

Name _____

TILITE

Name of Pool _____

Address _____



TILITE

PENNSYLVANIA SALT
MANUFACTURING COMPANY
Chemicals

NEW EQUIPMENT

Gymnasium Fixture



The Goodrich Electric Co.'s new surface mounting gymnasium fixture sets a new standard for simplicity in both design and installation. The fixture consists of a sturdy housing of heavy gauge steel with reinforced edges and a finish of a pleasing shade of ivory. The greatest possible protection for the assembly is provided in the conical shape of the housing which offers only a glancing surface if struck by a ball from any direction. An opening of proper size in the center of the guard facilitates easy lamp replacement, as well as cleaning.

Football Helmet

In answer to a growing demand for a better grade of football protective equipment, the Wilson Sporting Goods Co. has developed the "Soft Top" Helmet, which not only protects the wearer but gives some protection to the opponent. The hard leather outside covering has been left off this helmet. Instead a padding of air-light rubber has been placed over the hard fiber crown and covered with leather, giving protection all way 'round.

Sun Lamp

A new mazda-type S-4 sun lamp, producing ultraviolet radiations similar to those found in midsummer sunshine, has just been perfected by the Westinghouse Lamp Division. It is suited for use in small portable sun-lamp fixtures, consisting of an inner tube of ultraviolet-transparent fused quartz in which the radiations are generated by a mercury arc, and an outer A-21 bulb of special glass which also transmits ultraviolet. The rated life of the S-4 is listed at 400 applications rather than in burning hours. Under normal use, it should give more than a year's service.

Basketball Winding



The Wintark Co. (not Inc.), manufacturers of molded composition covered playground balls, has recently procured "Cordura" rayon, manufactured by the du Pont Co., for use in its products. Unlike most rayon, Cordura is made entirely from cotton linters, giving it much greater flexing life and tensile strength than cotton yarn of equal size. Most interesting for ball use is its tremendously low elongation factor which gives it the power to hold a ball in shape under the most severe conditions.

Free Offer

The Bike Web Mfg. Co., famous for its line of athletic supporters and surgical and athletic bandages, are planning a series of historical articles on the various sports. Reprints of the material will be available free for the asking. The first reprint, on tennis, may be obtained by writing to the Bike Web Mfg. Co. at 41 West 25 St., Chicago, Ill.

Specify

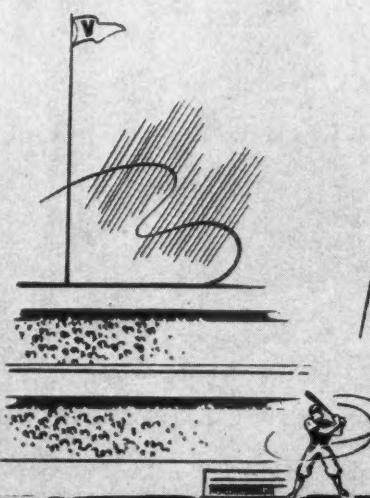


• Look for the DOT...it identifies the genuine Voit Soft Ball. Imitated—but never duplicated!



Now "Gum-wound"!

Voit Official Soft Ball hits a Home Run in value for you. Its scuff-proof rubber cover has no stitches to rip or wear out, is weather-and-water-proof, will neither take on nor lose weight, crack, dry out or harden. Kapok center is uniformly wound with high quality latex-impregnated cotton yarn by exclusive gum-winding process, then vulcanized to tough Rubber cover. Cover-and-yarn are virtually a one-piece unit which cannot loosen, slip or lose its shape. Pure white, washable, perfect for night play. Sizes from 9" to 16". See your Sporting Goods Dealer today. Write for new catalog.



Voit Sports Equipment also includes Enduro, Regulation and All Rubber Athletic Balls, Inflated Playground Balls, Tennis Balls, etc.

VOIT SPORTS EQUIPMENT

MFD. BY W. J. VOIT RUBBER CORP., 1600 EAST 25TH STREET,
LOS ANGELES, CALIF. • BRANCH: 180 N. WACKER DR., CHICAGO, ILL.

VOIT OFFICIAL BASEBALL . . .
Ideal for batting practice and general playground use. Durable rubber cover, white, weather-water-proof. Keeps its shape...Official 5 oz. weight.



It's FINISHING POWER That Counts!

**TRY THE PROVED KNOX
GELATINE WAY TO BUILD
EXTRA ENDURANCE—
POSTPONE FATIGUE!**

• Top-ranking coaches know it's the power to keep going strong—clear to the finish—that piles up winning scores. That's why so many of them have adopted the easy, proved Knox Gelatine routine to step up teams' stamina, ward off let-down. While Knox cannot make a team win, coaches and trainers have found it does give players added vim, extra "comeback"—helps them through stiff competition with fewer injuries, less muscle strain.

Colds, weight losses checked with KNOX

According to prominent coaches and trainers, remarkable (almost complete) freedom from respiratory infections resulted when squads received Knox Gelatine regularly (on the training table or in the locker room). And weight charts showed less weight loss during competition—plus a quicker recovery of lost fluids.

Knox—and Only Knox—Has Proof

But remember—Knox is the *only* gelatine with hundreds of tests and laboratory experiments to prove its

stamina-building power. In group tests among average men and women doing all types of work, Knox has been *proved* to lick tiredness for *9 out of 10* completing the 28-day Knox routine.

Do not confuse Knox Gelatine with inferior, *unproved* gelatinates, or with ready-flavored gelatine desserts which are only about 10% gelatine and about 85% sugar. When making up your budget for Fall athletic training materials, be sure to include Knox Gelatine—and only Knox!

HOW TO DRINK KNOX GELATINE (Formula Advised by Famous Coaches)



THIS IS THE GELATINE For More Endurance— Less Fatigue

Knox Gelatine was used exclusively in the scientific tests and experiments. Ready-flavored gelatine desserts which are about 85% sugar and only about 10% gelatine will not do. Be sure to use the plain, unflavored Knox Gelatine—K-N-O-X—which you can get from any grocer.

1. Pour 6 ounces of cold water in an 8-ounce glass.
2. Pour onto the water 2 envelopes (or two level tablespoonfuls) of Knox Gelatine.
3. Let liquid absorb the gelatine. Then stir briskly and drink quickly. If it thickens, stir again.
4. Do this twice a day—before or after meals—for seven days. Then reduce to 1 envelope (or 1 tablespoonful) twice a day. If there is a drop in the weight, increase to original 2 envelopes.

ACT TODAY

Write for details of how Knox can help build stamina for YOUR team. **Knox Gelatine, Dept. 81, Johnstown, New York.**

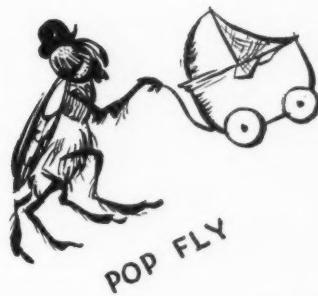


Here Below

CLEAN-UP MAN



HITS, RUNS AND ERRORS



SQUEEZE PLAY



GIVING SIGNS

WARMING UP
IN THE BULL PEN

Illustrated by K. "Fireball" Tracy



DUSTING OFF

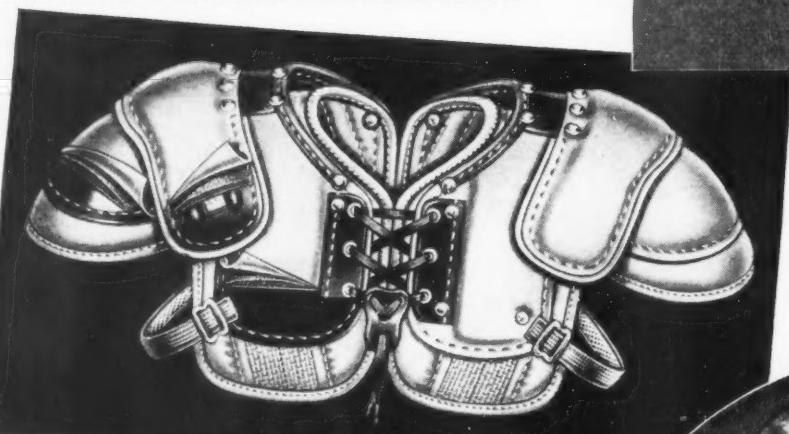
"THE HAZARDS OF HARD FOOTBALL ARE MINIMIZED

*by Modern Equipment like this"
... say Prominent Coaches*



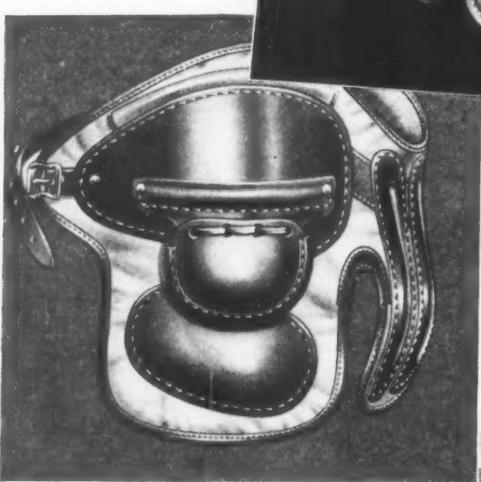
**WILSON 1940
SHOULDER PADS**

Featuring an entirely new and revolutionary idea! Most shoulder pads in the 1940 line are furnished with a new outer-cushioning of Air-lite rubber, covered with canvas or soft leather, to further protect player and his opponent. Every other detail improved. See this great equipment.



**WILSON 1940
"SOFT TOP" HELMET**

Improved throughout! Soft top crown. Air-lite rubber over fibre crown, covered with soft leather. Sizes micrometrically checked for correct fit. Air-lite cushioning shaped to fit the head—no uncomfortable ridge. Shock-absorbing suspension strengthened. Built to give real protection and alive with eye appeal.



**WILSON 1940
HIP AND KIDNEY PAD**

The last word in hip and kidney protection with freedom of action. Fibres correctly placed—treated to minimize absorption of perspiration. Hanging fibres have new shape and size giving added protection with less bulkiness.



**WILSON'S GENUINE
LASTEX SHELL PANTS**

The product of three years of research and experiment. Made of genuine Lastex yarn—double sewed with Lastex yarn for uniform stretch and "give." The most modern football pants in America. Comfortable! Good looking! Durable. Many combinations of Lastex and other desirable materials. Investigate!



**WILSON 1940
OFFICIAL W R FOOTBALL**

Sensation of the 1939 season—a truly modern football. Better hand-traction for secure, accurate passing and handling. Now better than ever—including lock stitched, impregnated, triple lining. It's the ball of 1940. Don't fail to investigate.

The counsel of modern football coaches plus field testing by university football teams enables Wilson to prove out new features in protective equipment.

The new Wilson 1940 line of football equipment is modern—studded with important features to protect not only the wearers but their opponents—and to aid in fast, comfortable play. See this modernized Wilson equipment at your dealer's store or write us for catalog—before you make any commitments. Wilson Sporting Goods Co., Chicago, New York and other leading cities.

"It pays to play."

Wilson
FOOTBALL EQUIPMENT

IT'S WILSON TODAY IN SPORTS EQUIPMENT

FIRST PRACTICE—THE GROUND STROKES

By J. Donald Budge

Don Budge's article is a condensation of two articles which the world's ranking player contributed to the 1937 edition of the American Lawn Tennis' annual, "How Lawn Tennis Is Played." The 1940 edition will be ready for distribution in April at 50 cents per copy, a good buy if ever there was one.

THE first thing for a beginner to do is to learn to keep his eye on the ball. The ball must be hit, and to be hit must be seen and watched closely. It is well to learn to watch the ball up to and through the moment of impact with the racket.

A good method of teaching the player to observe this cardinal rule is to toss a ball to him a few times and let him catch it on the first bounce. He will soon accustom himself to the flight of the ball and be able to keep his eye trained on it while preparing to deal with it.

When the pupil shows sufficient ability at handling the tossed balls, he should be allowed to practice on balls hit to him. The best way for a beginner to learn the game is to take the strokes one at a time in the following order:

1. The forehand drive, undoubtedly the most powerful forcing weapon in a player's game.

2. The backhand drive, a brother stroke to the forehand. Although the backhand is the obvious point of an opponent's attack, it is more difficult to develop to a high degree as an offensive weapon.

3. The service is relegated to third place because I believe it is an easy stroke to learn. Since the player tosses the ball into the air before hitting it, he is therefore faced only with the problem of standardizing the toss and swing.

4. The overhead smash is made with the same stroke as the service. Its use is in dealing with high balls lobbed over a player's head after he has attained the net position.

5. The volley, both forehand and backhand, should be learned simultaneously.

6. The lob is not only a valuable unit in defense but can also be used as a means of offense. It consists merely in hitting the ball into the air, over the head of an opponent who is charging the net.

7. The so-called "ornamental" strokes (slices, drop shots, chops, half-volleys, etc.) should be definitely left to the end of a beginner's program.

The best way to learn the game is to take up the strokes one at a time, beginning with the forehand

Not until after the beginner has acquired a fair knowledge of stroke production and timing, which also means keeping the eye on the ball, should he begin to play the game. He should play against the best available competition, by all means someone better than himself.

Some coaches advocate an exten-



AWAITING THE SERVICE with the Eastern grip. The weight is distributed evenly over the toes and the eyes are glued to the ball. By keeping both hands on the racket, the ball player facilitates the shift to either the forehand or backhand side. The grip is shown below.

sive use of practice boards. They have the advantage of enabling the beginner to practice by himself. Also they enable him to concentrate on one stroke at a time. As the bounce is usually quite standard, the player has only to think about the mechanics of making the stroke.

They are, however, of little use for any but the ground strokes. It is very difficult for the player to judge the length of his shots; he tends to hit too hard in order to make sure that the ball rebounds far enough from the wall for his next shot.

[Tom Stow, the famous University of California tennis coach, has perfected a Stroke Developer which enables both the beginning and the advanced player to practice strokes, footwork and form without worrying about timing the ball. The device consists of two tennis balls, one for ground strokes and the other for overhead strokes, which are attached to rubber cables and which may be moved up and down to desired positions. The ball presents a stationary target for any type of stroke the player chooses to practice. Upon being hit, it shoots forward into space but is soon brought back into position again by the attached rubber cords.]

Gripping the racket

There are three orthodox types of grips—the eastern, the continental and the western. The eastern consists of shaking hands with the handle of the racket, while the racket is standing on edge. This places the wrist behind the racket handle and gives extra power in making the shot. The shift to the backhand, which is hit on the opposite face of the racket, involves about a quarter turn of the handle, the hand being placed on top of the handle.

The continental grip is the same for both forehand and backhand shots. It is much the same as an eastern backhand but the turn is slightly less than the quarter circle necessary in the first case.

Using the eastern grip again as a starting point, the western grip calls for a quarter turn of the racket in the opposite direction from the continental, the wrist being perpendicular to the broad side of the handle. The backhand is made with the same grip and on the same side of the racket. Many players today use a western grip on the forehand, and change to one of the others for the backhand.

The continental grip is best adapted for taking the ball on the rise. It also gives the player an opportunity to hit all of his shots without changing his grip, and it is especially useful for hitting wide shots off either wing. The disadvantage is that to get any great amount of pace off the forehand, one must have a large, strong wrist.

I believe the eastern grip is the most suitable for the all-round

game. Its advantages lie in the tremendous power that can be used, its ready adaptability to all surfaces and its wide margin of safety, as it can be used to hit either flat or with overspin. The one disadvantage is the necessity of changing the grip for backhand and forehand shots.

I think that this is negligible. For my own purposes, I not only change the grip, but place my thumb up the back of the handle in making a backhand. It is the style I would recommend to any player starting the game.

The ground strokes constitute the basis for every player's game. I would say that about three-quarters of the balls hit during a match have first been allowed to bounce. Even an inveterate net player is forced to take many shots from the ground, and is only able to attain his position at the net through a sound offensive off the ground.

Position in the court

The ground strokes consist of the forehand drive, the backhand drive, slices, chops, and lobs. I do not believe that my own style of stroke production is the best or the only style that should be used, but merely that it is the best suited for my own purposes. Many of the fundamentals I will list apply to each of the three orthodox styles.

The first important fundamental is one's position in the court. This can be divided into several parts: position while waiting for the ball, position in getting ready to hit the ball, position as the ball is being hit, and position after the stroke has been produced.

The player should face the net while awaiting his opponent's shot—with his weight on his toes and his eyes properly glued to the ball. As soon as he is able to ascertain where the ball will strike in his court, that is on which side and approximately where, he should move close to that spot.

The method of moving about the court depends upon the quickness of the player's eye and his ability to anticipate his adversary's shot. I prefer a side-skipping method. In this way, I am able to keep my eye on the ball and keep my position facing the net. However, I am often forced into a regular run to retrieve an opponent's shot when I find that he has placed it too far away from me to reach by skipping. I like the skip because it makes me "feel" on my toes.

The second position is the reverse. As the player prepares to deal with the ball, he turns until his body is

at right angles to the net. The reason for this is that in stroking the ball, he must transfer his weight from the back part of his body to the fore part. The side stance is just as necessary to accomplish this as it is in boxing, where the fighter throws his punch, or in baseball, in pitching or in batting a ball. Just try throwing a ball with the body facing the direction it is to go, and you will see how little speed results.

As the player assumes this position, he must be sure to have his weight well forward on his toes. It is very difficult to shift the balance properly if the weight is on the heels.

If the player is making a forehand shot, the left foot will be closest to the net, and if a backhand is in order, the opposite will be true. The weight should first be allocated to the foot or side nearest the net. As the player prepares to stroke the ball he should shift the weight rhythmically from the front to the back foot or side. Sometimes he is able to do this better by slightly turning his body to keep balance.

After having made this preliminary back shift, which should be in conjunction with the backswing of the racket, the player once again makes a shift. As he strokes the ball he transfers his weight from the back of his body to the fore part. This has the effect of giving the shot all the benefit of the body weight. This shifting process must be made smoothly or tragic results will follow. If jerky methods are used it is difficult to govern the direction of the ball.

Weight forward

The position after the ball has been hit should be the original, facing-the-net position. The weight, however, should be forward, so that the player may keep moving into the net, if he desires, to force the attack to his opponent. If he decides not to continue forward, he can catch himself and once again await his opponent's next offering.

The next step to consider is the position of the racket during the backswing, the impact, and the follow through.

The backswing, preceding the stroke, may be patterned after either of two schools: the long backswing or the short backswing. The purpose of the backswing is two-fold. It puts the racket through a preliminary swing which gives it initial momentum, and it lines the racket up with the height of the ball.

While I believe that greater con-

trol is obtained by using the long swing, the wonderful effect of the element of surprise causes me to believe that both methods should be used. When a player has lots of time, I suggest that he use the Tilden or long style. If he is being pressed, wishes to stage a surprise attack or wishes to conceal direction, I suggest that he take the gamble on the Continental or short style.

The backswing

The backswing may be a circular type or straight back. I start my racket slightly up and back. As I reach the complete depth of the swing, I straighten the racket out and bring it straight through level with the height at which I wish to hit the ball. I believe the arm should be relaxed and extended in making the complete stroke; the player should plan to hit the ball at that distance from his body which allows him to relax his arm comfortably in its extension.

The racket assumes a slight bevel at the moment of impact, with the top edge slightly in front of the bottom edge. The purpose of this is to impart a slight overspin to the ball. The player should prolong the moment of impact with the ball. The longer the ball rests against the strings of the racket, the more control results. The forward swing should start on a horizontal plane, but deviate to a slightly upward stroke at the moment of impact.

This slightly upward stroke is the beginning of the follow through, which continues up on over the shoulder nearest the net. When sufficient time allows, I prefer a long follow through to match the long backswing. Where a short backswing is used I advise a very slight shortening of the follow through, because this increases control.

The wrist in the backswing represents the open door or bent back part of a hinge. As the racket is swung forward, the wrist strengthens itself out at the moment of impact, and bends slightly forward to finish the stroke.

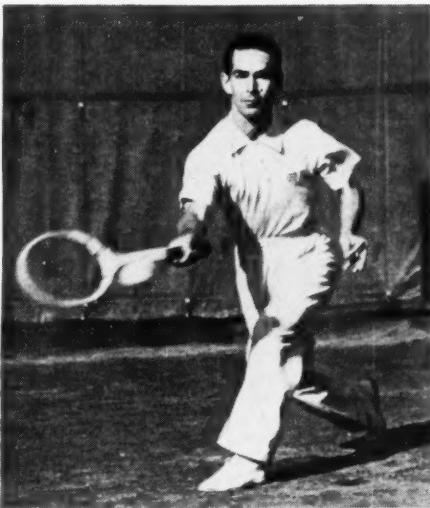
The flat-hit ball differs from the overspin drive in the impact and follow through. The impact is made with practically a vertical racket face. The follow through continues on the same level, at the same plane, with almost no change in the bevel of the racket.

The flat shot can be used effectively about one-quarter of the time. Its advantage is that the ball takes a hard, flat and low bounce. It is

(Concluded on page 49)



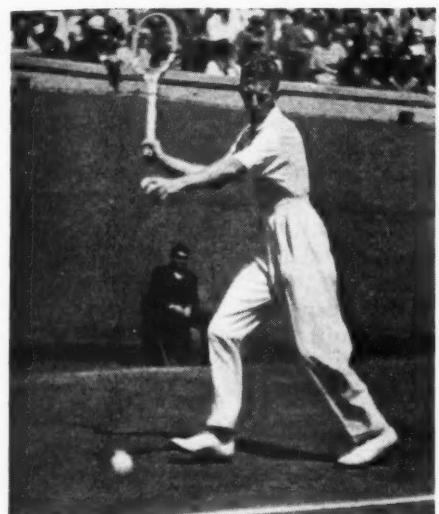
ERNEST SUTTER, younger brother of Cliff, who now ranks No. 13 in his own right, is shown returning a drive to his deep right corner. He is making a flat return drive with good extension of the arm. After the stroke he must quickly reverse his direction so as not to leave the court open.



WAYNE SABIN, our fifth ranking player, is here making a slightly undercut forehand. Sabin's strokes are made with a great deal of whip from the wrist, which enables him to conceal, until the last moment, the speed and direction of his shot. In this case the undercut probably had a low bounce.



DON McNEIL, the country's No. 3 man, has had time to get set for this shot. His stroke will be a hard forehand with plenty of topspin on the ball to keep it from going out. McNeil uses topspin on many of his shots and has very fine control. He plays a hard, forcing brand of tennis.



GROUND STROKES

DON BUDGE (Left) taking the measure of a ball in his last appearance at Forest Hills as an amateur. As he will take one and a half steps before hitting the ball, this picture does not show the full extent of his superb backswing. The ball probably did not have much pace on it, allowing Budge more time than usual to get into position.

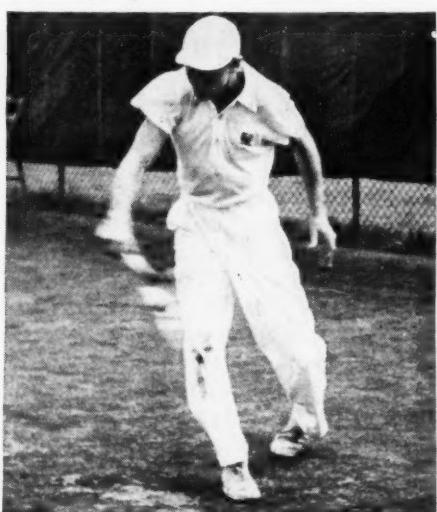
GIL HUNT (Right) has transferred his weight to his forward foot in this picture and will depend on his body pivot and wrist to give pace to his return. The backswing is short and the left hand supports the racket. From the position of the player's feet and body, the return will be made cross-court to his opponent's backhand.



LARRY DEE (Below) of Stanford shows fine body balance and wrist-whip in these pictures of two different shots. Note in the second picture how his wrist precedes the racket head just before contact. Taken together, the pictures show how power is imparted to a

shot by a body pivot from the initial position at right angles to the net. Like many players while waiting a ball to their backhand, Dee supports his racket with his left hand. This style takes some of the racket weight off the wrist and helps get the racket back.

ADRIAN QUIST (Below), Australian star, uses the Continental grip so that he does not have to shift his hand when changing from forehand to backhand. On this shot, which will be a flat hit backhand, the wrist and racket handle form an angle throughout the stroke.



SCHOOLBOY CATCHER IN THE MAKING

By James L. Quigley

This is the concluding installment of a series of two articles on catching by James L. Quigley, former college and semi-professional catcher who now divides his time as a physical education instructor between the Savage School of Physical Education (college) and the George Washington High School, both in New York City. Last month the author covered equipment, stance, reception, throwing, and plays at the plate. He winds up his series with tips on signals, targets, sizing up batters, the technique of fielding flies and bunts, and defense throwing strategy.

AS THE key man of the defense, the catcher dictates the nature of every pitch. The success of the pitcher depends largely on the shrewdness of the sign giver, and every possible precaution should be taken to conceal the signs from the enemy.

In giving the sign, the catcher assumes a squat position with the feet close together and pointing straight ahead. The knees are apart and the trunk is bent slightly forward. Since all receivers are right-hand throwers, the gloved hand rests on the left thigh with the glove extending palm inward beyond the knee or close to the body directly over the opening made by the legs.

The sign is given with the right hand against the inside of the right thigh. The sign is thus concealed from all prying eyes with the exception of a runner on second base.

The average catcher is equipped with five signs. Three of these designate the assortment of pitches and the other two are designed for the purpose of picking men off base. As an example, one finger may signify a fast ball; two, a curve; and three, a change of pace or slow ball. The sign for a waste ball or a pitchout is usually a clenched fist.

By studying the base runners for any peculiarities, a smart catcher can often discern what they have up their sleeve. If he thinks a runner is about to go down, the catcher may call for a pitchout and nail the man as he goes into the base.

The receiver should not be too free with his pitchout signs. He should help the pitcher out with men on base. Too many schoolboy backstops call for pitchouts in self defense. Instead of perfecting the throw from the strike area, they will call for a pitchout to get a clean shot at the runner. This may often lead to trouble. If the runner is safe, the extra ball on the batter may put the pitcher in a hole. Sooner or later

The receiver should work upon the pitcher's strength rather than to the batter's weakness



CATCHER'S SHIFT: On a bunt along the third base line, the receiver pounces upon the ball from the outside and fields it with his legs comfortably spread and the feet at right angles to the roll. After the ball has been picked up, the weight is shifted to the right foot and a step made with the left in direction of the throw.

he must come through with a good one and the batter may connect for a base hit.

If the runner is taking too great a lead off the bag, the catcher may flash a pick-off sign to the pitcher or call for a curve-ball pitchout and go after the man himself. He should have a prearranged sign for these contingencies. By brushing his hand carelessly across his mask or touching the mitt with his bare hand, the catcher may inform his baseman that he is going to make a play for the runner. The infelder may acknowledge the sign by touching the peak of his cap or kicking the dirt at his feet.

A runner on second is often a trouble-maker to the catcher. Since the runner can see any sign the catcher flashes, he may steal the signal and relay it to the batter. The well-coached catcher is prepared for this emergency. He camouflages the real sign with a number of meaningless finger movements.

For example, using the same system of signs as before, the catcher may guide the pitcher thusly: one finger followed by one finger and then two fingers would indicate a fast ball; one finger; two fingers and one finger a curve; and two fingers, three fingers and two fingers a slow ball. The second showing of the fingers is the real sign.

There are any number of ways to switch signals to prevent them from being purloined, all of which are

probably too complicated for schoolboy receivers. The next best thing the coach can do is to equip his catcher with two sets of signs. If the runner on second base succeeds in stealing the first set, the catcher may flash a "sign-off" and come back with the second set. The second set may consist of the following: flat hand for fast ball, one finger for curve and a wiggle of the fingers for a change of pace.

The entire team should know the type of pitch that is to be delivered. The shortstop may relay the information to the third baseman and the outfielders, while the second baseman may pass it along to the first baseman. This may be done by signs (to the outfielders) or orally to the infelers, the glove acting as a shield.

Attention-getting devices

After flashing the sign and straightening up, the catcher can make himself useful by giving the pitcher a target. If the moundsman is a good high ball thrower, the mitt may be held in front of the body above the waist with the palm out and the fingers up. The bare hand may be placed alongside of the mitt or behind it. For a low ball pitcher, the target should be presented between the knees and the belt. Both hands may be extended forward, close together with the palms out and the fingers down.

There are times when it will be more advantageous to pitch to the batter's weakness rather than to the pitcher's strength, especially when the batter is a good high or low ball hitter. With the majority of batters, however, the pitcher is better off throwing over the plate where it is natural for him to throw.

Every batter presents an individual problem, the solution of which may be easy or difficult. Such factors as the score, inning, outs, his place in the batting order, number of men on base, and peculiarities of the playing field, all have a bearing on the manner in which he should be pitched to. The catcher, therefore, must rise above the mechanics of his position and apply himself diligently to the task at hand. In short, he must think fast and think well.

Batting order a tip-off

The batting order itself will ordinarily give the sign giver a fair index of the strength of the hitter. The lead-off man is usually a good waiter, fast, seldom strikes out, a smart base runner, a good bunter, and a sharp hitter.

The second man up usually can hit behind the batter, lay down a good sacrifice bunt and hit fairly well. The number 3 man is the best hitter on the team. The fourth batter is a long ball hitter who can be depended upon to drive in runs. The fifth man is the second best hitter on the team; the sixth hitter is a fair bunter and a good hitter; and the seventh, eighth and ninth men are usually the weak sisters.

In addition to the information gleaned from the batter's place in the batting order, the catcher should catalog him as he steps up to the plate. Are there any peculiarities in his stance? How does he hold the bat: choke, modified or at the end? In addressing the ball, does he step in or does he retreat? Is he plate shy? Does he step in the bucket? or does he follow the ball all the way in? Is he cocky? Does he lack confidence?

The batter's step will usually reveal his weakness. If he steps directly toward the plate, he will have trouble with an inside fast ball or a pitch that breaks quickly in toward the knees. If he steps away from the plate, he should be fed outside stuff; fast ball, curve or slow ball. The man who steps directly forward is the dangerous bird. Keep them close and keep him loose.

Many times a player may reveal a batting weakness merely by the way he stands up at the plate. Play-

ers who stand erect or hold the bat in a high position are usually high ball hitters. The man in a crouch with a low control over the bat likes to go after the low ones.

If the batter discloses his intention of bunting, the catcher should signal for a high inside fast ball. When an attempt is made to hit behind the runner, the ball should be pitched outside to a left-hand batter and inside to a right-hand hitter.

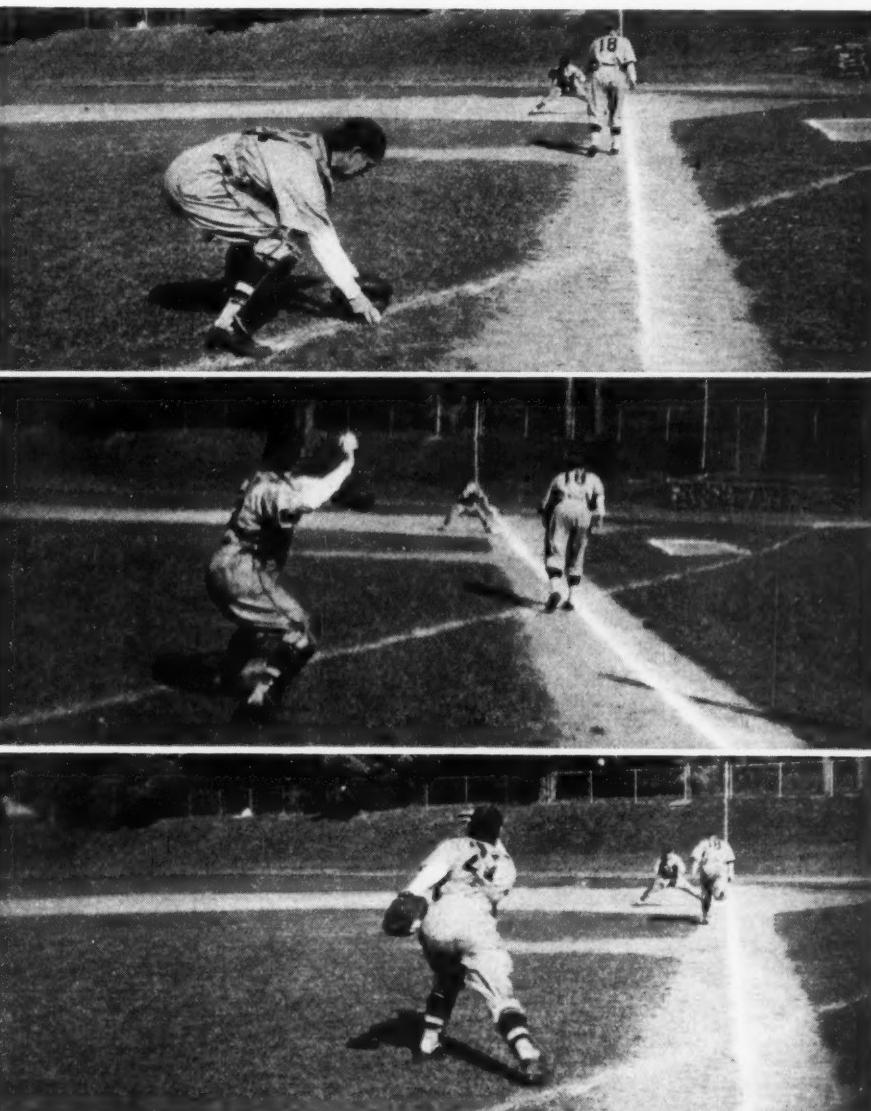
There are few pitchers who possess good enough control to start working on batting weaknesses on the first ball. To prevent the pitcher from getting into a hole on the very first pitch, the catcher should call for a fast ball that goes over the plate for a strike. The percentage is all in favor of the pitcher, since there are few good first ball hitters. When the first ball is a

strike, the batter is in a hole and may go after the following pitch even though it may be outside the plate.

The catcher is frequently called upon to field a bunt or a ball that has been topped and rolls a short distance from the plate. Regardless of which side of the diamond the ball is on, the catcher should field it from the left side. Unless it is impossible to field the ball otherwise, he should never pick it up with one hand. He should pick it up with both hands, or if it is a twisting ball, he may place the mitt in front of it to stop it and then pick it up.

On a throw from the third base side of the diamond, the catcher must execute a shift to get into throwing position (see illustrations). If the bunt is recovered from

(Continued on page 34)



TOP: On a bunt along the first base line, the ball is again fielded from the left. The first baseman stretches well inside and presents a target for the throw.

CENTER: When the time element is in his favor, the catcher may straighten up after fielding the ball and throw for the putout with his regular overhand motion.

BOTTOM: When the runner gets away fast and there is little time to straighten up, the catcher should scoop up the ball and throw to first either sidearm or underhand.

A FAIR EXCHANGE WINS MANY A RACE

By Vincent Farrell

Vincent Farrell, track coach at both Panzer College and West Side High School (Newark, N. J.), presents several of the more popular methods of passing and receiving the baton.

RELAY racing is comparatively new on the schedule of track events, and passing the baton is even newer. Originally, the runners merely touched each other's hands in a zone of change. The oncoming runner stretched out his hand, the relief man established a split-second contact and off he went.

Simple as it was, the touch-off system proved unsatisfactory. In their haste to get away, some runners were neglecting to make contact—and getting away with it. Since the hand is quicker than the eye, the error frequently went undetected. To make certain there was actual contact, and to prevent any possibility of confusion, the baton was introduced.

Nowadays the relief man must receive a "stick" before he can begin his "leg." The baton exchange furnishes a hazard to the relay team, but it has added an element of suspense to the race. When teams of equal ability meet, the team with the defter, speedier stick handling usually wins.

Since the actual running of the race has many things in common with sprinting, middle distance and distance running, the phase which needs special emphasis is the technique of carrying and passing the baton.

The baton must be exchanged within a 20-yard zone formed by lines drawn ten yards on each side of the exchange mark. There are any number of ways to effect the transfer, all of which fall into two general categories—visual and non-visual. For races over the longer distances, 300 yards or more, the visual pass is recommended because the passer may be in distress when he reaches his relief and cannot be always counted on for a sure pass. The non-visual pass is universally employed in all sprint relays and on those legs of medley relays in which the passer runs 300 yards or less.

There are at least five general styles of passing on the basis of arm and hand position. For the sprint relays, I teach my boys two different methods. In both of these, the relief man takes a position

Several methods of passing and receiving the baton, and suggestions for the daily practice sessions

close to the first line of the passing zone. His first move is to place a checkmark about six yards in front of the zone to aid him in judging the approach of his teammate. This distance will vary, depending upon the speed of both runners.

The receiver waits at the zone line with the feet spread apart and the left foot about 18 inches in front of the right. The knees are bent, the body is leaning slightly forward and the right arm is slightly back with the palm up.

The getaway

As the runner approaches, the right arm is extended backward so that the hand is at hip height. The palm is up and the fingers are spread slightly with the thumb pointing away and towards the body. This gives the oncoming runner a broad surface into which to place the stick. As the passer hits the checkmark, the relief man immediately darts away, keeping his eye on his palm as he does so.

The college or A.A.U. runner will keep his eyes focused on the passer until the latter reaches the checkmark, after which he will turn his head to the front and start running. In working with less experienced boys, however, it is advisable to play safe. Let the boy focus his eyes on his palm until the stick is inserted.

With practice this type of pass will permit a speedy exchange at optimum speed. Once the stick is completely in his possession, the relief man should immediately switch it to his left hand. Occasionally, a boy will make the shift during the last few strides at a time his body control is least efficient. The most opportune time to shift the baton is on the first stride, when it causes the least interference.

The second method of exchange I teach is a non-visual pass. The receiver places the fingertips of his right hand on his hip so that the hand is in a cupped position with the thumb out and pointing forward and the elbow bent away from the body. The receiver's head is slightly to the rear as he waits for the oncoming runner, but he turns it to the front before taking the baton. The passer accomplishes the exchange with a slight downward movement of the baton hand. This type of exchange is most effectively used in

sprint relays which are run in lanes.

In the longer relays, the visual pass is preferred because it enables the relief man to keep both the baton and the runner in his line of vision during the entire transfer. It does not permit as speedy an exchange as the non-visual pass, but it is safer.

There are a number of good styles of baton exchange for the longer relays. The receiver may extend his arm back and below the height of the shoulder with elbow and palm up, and the thumb pointing toward the body. Or he may extend his arm backward at about hip height or slightly below, with the palm to the rear and the thumb pointing downward. (See pictures on next page.) In the former style, the passer releases the baton with a downward swing. In the second style, contact is established with an upward motion.

In another method that is used successfully, the oncoming runner holds the baton on the top end with the left arm extended forward. The receiver reaches under the extended hand and takes the baton with a sidesweep of the right hand. When the approaching runner is tired, the relieving hand, being underneath, will grip the baton and prevent the danger of a fumble.

Gripping the baton

As a rule the number one man on the team is seldom given any detailed instruction on how to grip the baton when in position on his marks. The wise coach does not overlook this important item as many a race has been lost right in the starting holes. High school boys who have not been taught how to hold the baton are prone to leave their marks without the baton or have it knocked out of their hands because of an incorrect grip.

The first man should hold the baton in his left hand with a firm grip. The first and little fingers and the thumb press the ground while the second and third fingers are wrapped around the baton about an inch back of the center.

If the boy finds this grip uncomfortable, he should be taught some other good way of grasping the baton. There are several different types in popular use. He may: (1) wrap his last three fingers around

the stick and press the ground with his thumb and forefinger; (2) grip with the forefinger and press down with the other fingers, the thumb touching the ground but applying pressure on the baton as well; (3) pinch the stick in the palm of the cupped hand, all fingers pressing the ground; (4) grip with the second finger, the other fingers touching the ground. By carrying the baton in his left hand, the lead man eliminates the necessity of shifting it after leaving his marks.

During the race, the runner should hold the stick toward the rear side so that a considerable part of it is exposed at the forward end. This will facilitate the pass when it comes time to slip it into the relief man's hand.

The importance of baton passing cannot be stressed enough when training your relay team for competition. All during the daily warm-ups and jogging drills, the boys should be passing the baton to each other. One of the easiest drills for this purpose is to have them jog about ten yards apart. At a signal, the first man increases his pace a bit and, as he approaches within five yards of the second man, calls his name.

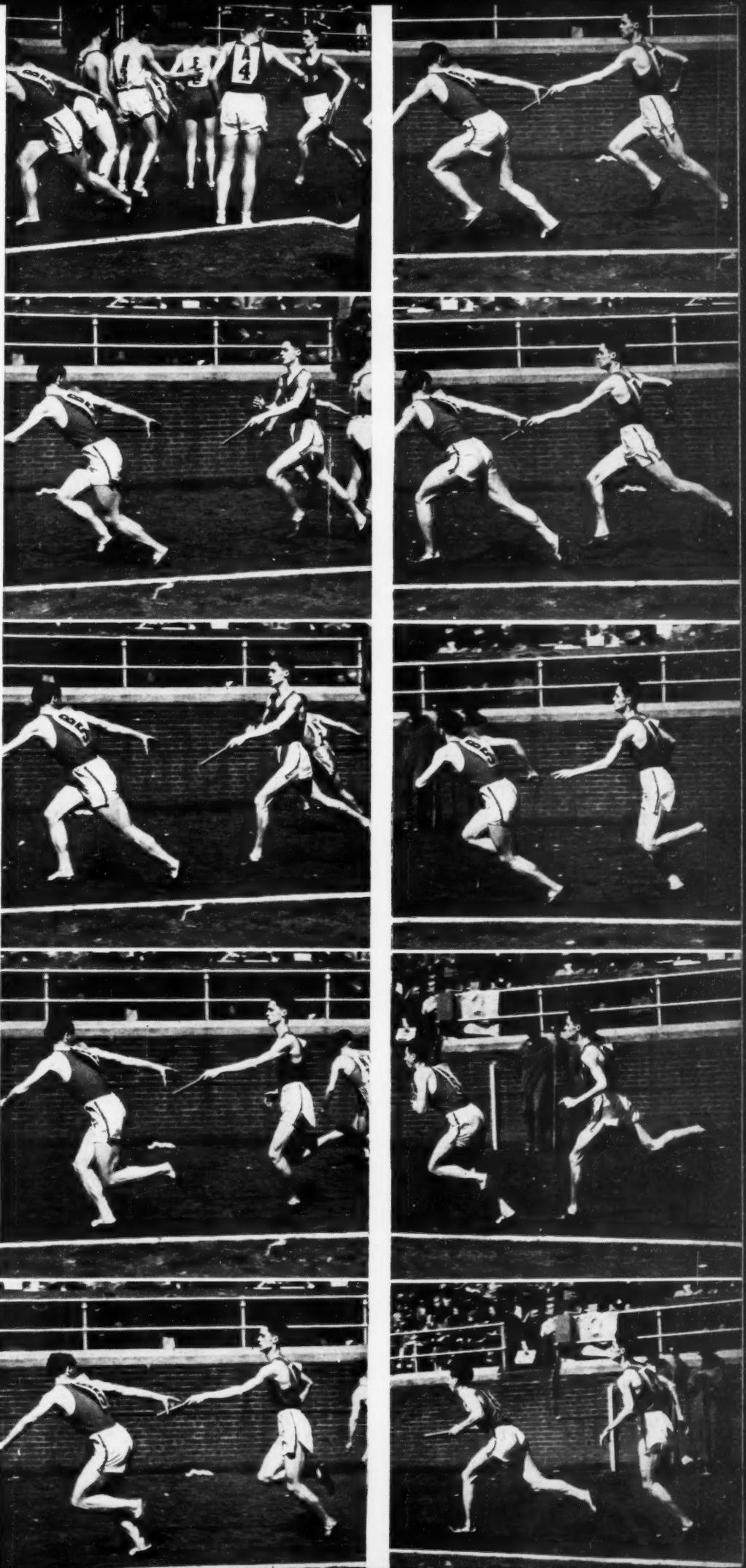
Give and go

The second man is alert for the call. He has his head turned slightly backward and his right arm to the rear. He takes the stick with his right hand and quickly switches it to the other hand. The same procedure is followed with the third and fourth runners. The boys may then reverse the process by turning around and running in the opposite direction. The last man now has the baton and passes to the third man, who is now in the number two spot.

In this fashion, the runners become acquainted with each other's assignment; and the time it would ordinarily take to return the baton to the first man is converted into additional practice work. This drill should be used extensively during the training period so that handling the baton becomes a second nature to the runners.

As the workouts become more strenuous, a more advanced drill may be given to the relay men. The runners may be stationed in the order you have tentatively selected them to run, about 20 yards apart down the track. Instead of merely jogging through their paces, they now work for speed and perfection of the exchange. The first man should take several starts daily with

(Concluded on page 44)





TIMING THE BATTING SWING

WATCHING Enos Slaughter of the St. Louis Cardinals in action, the observer is immediately impressed with the relaxed carriage of his body and the loose, natural action of his arms. The four components of batting (stance, step, swing, and follow through) are blended into the smooth, graceful motion that is the property of most good hitters.

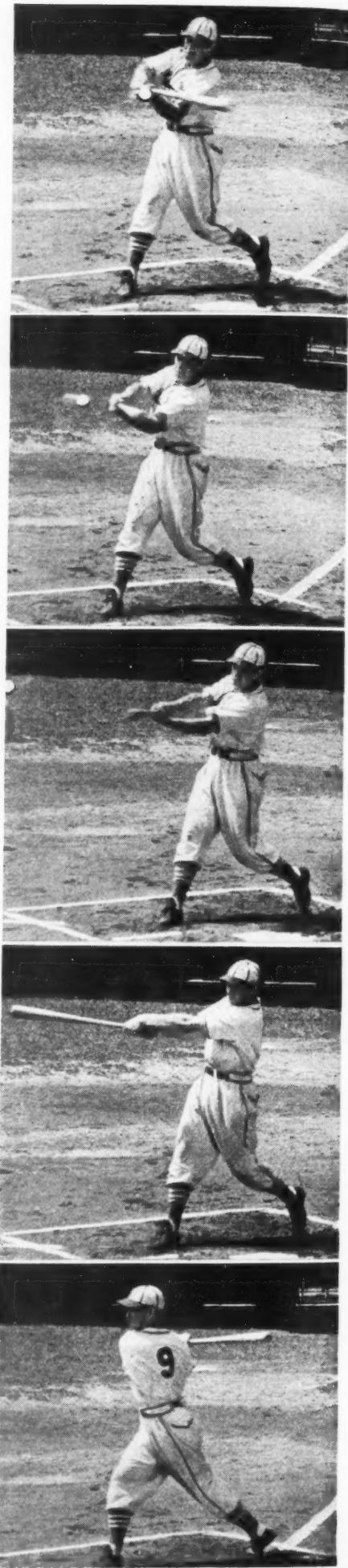
As he waits for the pitch in the first picture, he is perfectly relaxed with his feet spread comfortably and the body turned toward the plate. The hips and shoulders are level and the weight of the body is distributed almost evenly over both feet. His bat is not, perhaps, as far back as it should be. The average big league hitter will keep his bat back in the hitting position to cope with any attempts to quick pitch.

As the ball leaves the pitcher's hand, the bat is instantly thrust back to a good high hitting position. Having determined the course of the delivery, Slaughter then takes an easy but firm step directly toward the pitcher. The step and the swing is closely synchronized. As the bat comes forward, the weight starts shifting from the rear to the front foot. The bat is whipped parallel to the ground with a coordinated arm and wrist action. The left arm is kept reasonably close to the body and the shoulders on a level plane.

Contact is established at some point between the first two pictures on the right. The timing is almost perfect. The Cardinal outfielder meets the ball in front of the plate with the full power of the shifting weight behind it. The body follows through in the direction the ball is hit, the bat continuing under its own momentum to the rear of the body.

The right arm, the member closest to the pitcher, serves as a guide to the bat, while the arm opposite the pitcher (left) provides the impetus to the drive.

It is interesting to note the position of the head throughout this swing. At no stage of the series does it ever jerk out of line. The batter follows the course of the ball from the moment it has been released by the pitcher until it has been hit and on its way. So closely does he follow the ball that he probably sees it hit the bat (first two pictures on right).



OUTGUESSING THE MAN WITH THE BAT

By Charles A. Jamieson

Credit for the success of the Hamburg, N. J., High School nines is laid at the door of Charles A. Jamieson, a coach with a knack for developing better-than-fair pitchers. Despite the fact he has only fifty boys to draw from, Coach Jamieson always manages to crop up with a good pitcher.

WHEN you consider the proportion of responsibility vested in the pitcher, it is easy to understand why a boy with a good whip is worth his weight in gold baseballs. Even an old guard conservative will admit that pitching is at least fifty percent of a winning game. In high school ball, it often counts for more. Schoolboy batters do not stand up to fast ball pitching with the same composure as professional players, and many a successful team has been built around a hurler whose sole stock in trade was a smoking fast ball.

Coaches of young pitchers face two conditions which render their task an unenviable one: (1) control comes only after years of experience, and (2) a boy either has speed or he hasn't.

The coach should begin his first meeting by taking all the mystery, luck and heredity (we all have sons of pitchers) out of pitching. Let the boys know that a good degree of effectiveness is within reach of all if they are willing to work for it. This encouraging outlook will not hurt the attendance at the ensuing skull sessions. In fact, when the talk is well presented, the coach will find his little family growing.

In closing the meeting, emphasize to the boys that in a baseball sense they have only one arm and that they must take care of it. Over-work, cold-weather workouts, poor conditioning exercises, and other ill-advised program items cause bad arms and may eliminate a good prospect permanently. In any event, the boy should be instructed to report all muscular pains.

At the next meeting it may be well to shake their confidence a little by posing a few "inside" questions. For example, ask them how they would pitch to the lead-off batter if you were to start them in the first game. Naturally this is a fall question. Anybody having ideas on the subject should be asked for a complete explanation.

Point out that they haven't been told what type of batter the lead-off man is, that all batters are of

varying types and abilities and that a smart pitcher recognizes these differences and pitches accordingly.

The first batter may then be described. If you have a distinct bucket-stepper in the group, give him a bat and let him take several cuts in a batters' box which may be chalked lightly on the floor. Tell the boys to watch all his body actions and repeat your question on how they should pitch to him. Here you may find an observing few who will suggest (correctly) that a ball on the outside corner might be a good spot.

As the next step, it is advisable to classify the various batting stances and to point out the flaws of each. Fortunately, there are not too many species of the genus batter and a short course on batting weaknesses will soon enable the pitcher to see just what is wrong with the fellow at bat.

Sizing up the batter

There are four factors to consider in sizing up a batter: (1) where he stands in the batters' box, (2) how he stands, (3) how he steps, and (4) how he holds his bat.

All these factors may be determined by the pitcher as he waits for the sign. The batter will stand either deep in the box, in front of the box or somewhere around the middle. In each of these positions, he may be either crowding the plate, standing in a mid-center position or wagging his bat on the outside of the box. The manner in which the player grips the bat will usually determine his stance. The boy who grips the bat at the end, slugger fashion, usually stands away from the plate. On the other hand, the boy who chokes up on the bat will crowd the plate.

The slugger type batter may step in, forward or away and, as a rule, likes the low ones. The choke hitter is too close to the plate to step in to the ball. Hence you will usually find him stepping forward and hitting the high pitches.

The batter's step is a good tip on his weakness. If he steps toward the plate, he will have trouble on inside fast balls and sharp curves that break around his knees. If he steps in the bucket or away from the plate, anything on the outside will have him fishing. The man who

The batter who bears most watching is the fellow who steps almost directly forward

bears watching is the batter who steps almost directly forward. (For further material on batting weaknesses, turn to James L. Quigley's article, "Schoolboy Catcher in the Making.")

Very often, the batter will give away his intention of hitting behind the runner on a hit-and-run play, to bunt or to pull the ball. A high inside pitch will usually break up an attempted bunt, while a wide delivery is usually the order of the day to a left-hand batter who is attempting to hit behind the runner. The right-hand batter is fed inside balls on this type of play.

The reason is simple enough. With a runner on first, the batter will attempt to hit the ball through the right field side of second. Outside pitches are comparatively easy for a right-hand hitter to poke into that sector, while inside balls will handcuff him. The same principle holds true with a portside batter up. Left-hand batters have a natural pull into right field, and an inside pitch is right up their alley. It is good strategy, then, to throw to the outside.

The pitcher should never throw a slow ball to a left-hand batter in this situation because it is an easy pitch to pull. Sometimes, of course, it may be necessary to change the strategy. If a right-hand batter, for example, attempts to pull an inside ball into right field by stepping back from the plate, the pitcher should deliver the ball low to the outside where it is difficult to reach.

Strategy of the low pitch

Good pitchers do not waste much time with the poor hitters. They keep the ball low and refrain from throwing slow balls, a type of pitch which poor batters are most likely to hit. The ball should also be kept low with men on base, since most low pitches, and particularly curves, are hit into the ground.

Naturally the wider variety of pitches the boy has, the better equipped he is to fool the hitters. But in high school, a pitcher can get by with only a curve and an average fast ball. No time should be wasted on freak deliveries.

Careful attention should be paid to the positions in the box for the different situations. With no one on

(Concluded on page 31)



STRETCHING FOR A THROW

DOLF CAMILLI of the Brooklyn Dodgers, one of the best fielding first basemen in the big leagues, gives an expert demonstration of how to stretch for a thrown ball. A tall, graceful left-hander, Camilli is a Nijinsky in his own right around the sack. He has an extraordinary ability to dig throws out of the dirt and to shift his feet without losing balance.

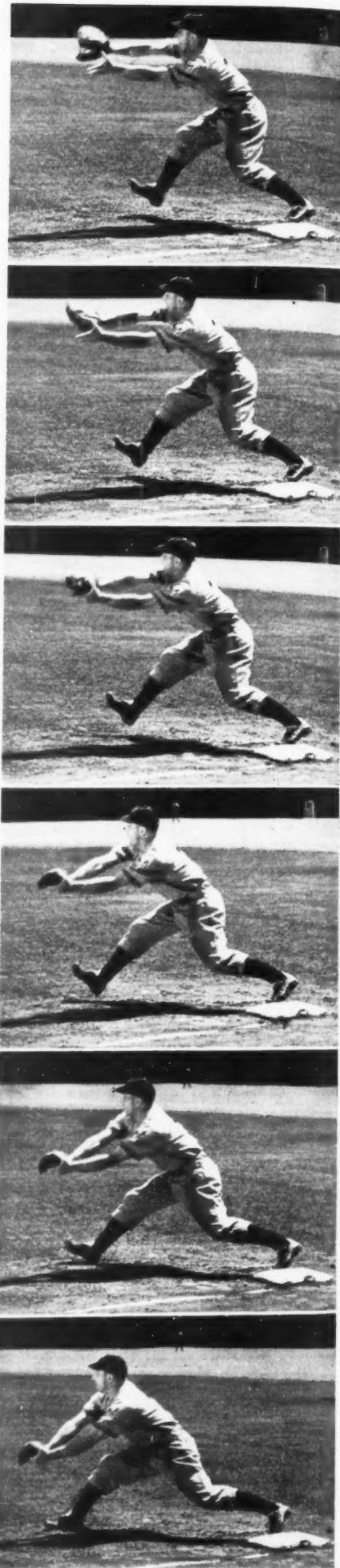
In this action sequence, he demonstrates the correct method of stretching for a perfect peg. On most plays to this base, the first objective is to get to the bag and face the player making the throw. From Camilli's position in the first picture, it is clear that he has not quite been able to reach the bag. To a fielder of his caliber, however, he is still close enough to make any shift that may be necessary.

Upon perceiving the direction of the throw, he touches the rear outside corner of the bag with his left toe and starts stretching forward into the diamond. Since the throw is about head high, he presents the glove so that the heel of the hand is down and the fingers up. He stretches about three feet forward and actually makes the catch (sometime between the first and second pictures on the right) before he can plant the leg.

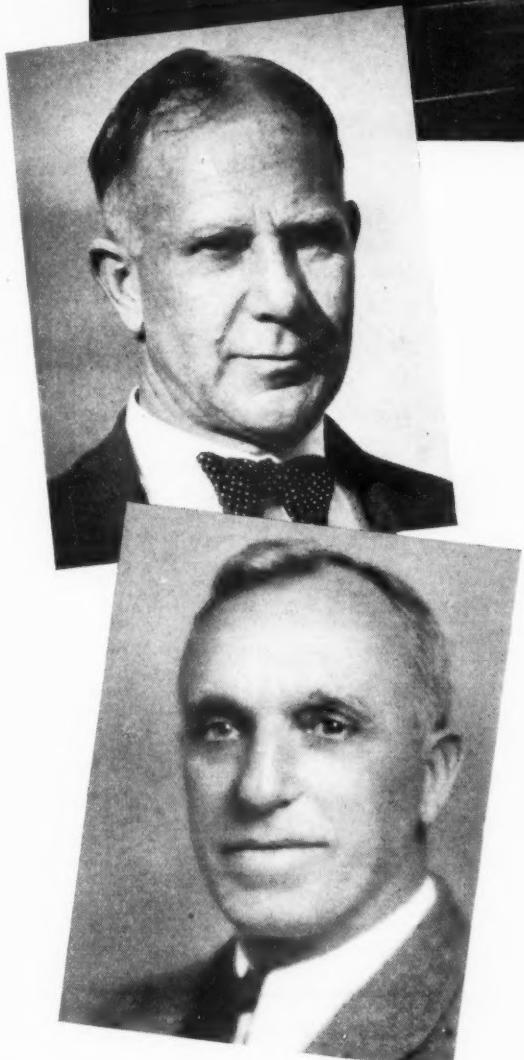
Adeptness with the glove hand is of utmost importance in fielding this position, but a good first baseman employs two hands whenever possible. Notice how Camilli makes use of both his hands. He extends his bare hand at the same time the gloved member is shoved forward. Once the ball hits the pocket, the exposed fingers are clamped over it for security.

Had the ball been thrown to either side of the sack, Camilli would have made his play differently. On a throw to the right field side of the base, he would have touched the bag with his left foot and shifted to the right. On a throw to the inside, or plate side, he would have shifted to the left and tagged up with the right foot. On some wild throws, the first baseman leaves the bag to make sure the ball doesn't get away.

(This action sequence is taken from the National League's film, "Play Ball, America!"



Tips On CONDITION



by **DEAN CROMWELL**
Track Coach
University of Southern California

"Back of every fine exhibition of speed and stamina is perfect condition. That is why outstanding performers in track never neglect condition—and never neglect to eat the foods that build it. You will always find milk on their training tables, because it is more valuable than any other single food in building endurance and condition."

Dean B. Cromwell

by **MATT MANN**
Swimming Coach
University of Michigan

"No athlete can perform well unless he gets an abundance of deep, restful sleep. Both the amount and kind of sleep are directly affected by the food that one eats. Milk, because it steadies and relaxes the nerves, is conducive to deep, refreshing sleep and good condition. It belongs on the ath'lete's 'home training table' at every meal."

Matt Mann

NATIONAL DAIRY COUNCIL, 111 NORTH CANAL ST., CHICAGO

FINANCING EXTRA-CURRICULAR ACTIVITIES

By Duke Thayer

After coaching football at White Pine County High School in Ely, Nev., for two seasons, Duke Thayer left last fall to take over his new post as coach of freshman athletics at the Arizona State Teachers College. In September, Thayer described the unique defense he employed at White Pine in an article entitled, "From a Basic 5-3-2-1 to an 8-3 Defense." He now submits the method of financing extra-curricular activities that prevailed at White Pine during his regime.

FINANCE is concerned with two factors: obtaining money and spending it. In a narrow sense, the budget is a statement of estimated receipts and expenditures. In a broader sense, it anticipates the needs of each department prior to the time of expenditure and facilitates an understanding of necessary economies. With these principles in mind, the writer will deal with the manner in which money is obtained at White Pine County High for extra-curricular activities, and the method of budgeting it.

Like most county schools, White Pine does not maintain a separate fund for athletics. The money that finances the athletic program is deposited in a general extra-curricular fund. This central "bank" also acts as a clearing house for the funds appropriated to dramatics, socials and kindred activities.

The bulk of the money is raised by assessing the student body. At the opening of the school year, each student is assessed \$1.50 as a book deposit (books are furnished by the school), and \$4 as an activity fee. The \$4 fee entitles the student to admission to all home athletic contests, plays, dances, debates, special assembly programs, and a copy of the annual yearbook.

The budget for the year is made up during the preceding spring on the basis of present school enrollment. For example, the Sept. 1938-May 1939 budget was estimated on the basis of the 1937-38 total enrollment. Thus, any increase in enrollment will leave a surplus to meet emergencies and other unforeseen expenses. The money left over at the end of the year is carried over to the next year.

The items included in the budget for 1938-39 follow:

Seniors (\$745)

500 Annuals

(\$1.35 per student) \$685

Play 40

Two dances 20

Juniors (\$60)	
Play	\$40
Two dances	20
Sophomores (\$20)	
Two dances	\$20
Freshmen (\$10)	
Dance	\$10
Athletics (\$750)	
Football (five home games) .	\$250
Basketball (six home games) .	300
Track (one home meet).....	200
Miscellaneous (\$355)	
Dramatics	\$50
Debating Club	50
Glee Club	25
Dance Orch. (14 dances)	70
Band	80
Club dances (8 school clubs) .	80

The entire budget totaled up to \$1,940. The budget was originally figured on the basis of 460 students, the enrollment total for 1937-38. But since the 1938-39 registration went slightly over the 500 mark, the expense of printing 40 extra annuals had to be added to the budget. The cost of producing one yearbook was originally figured at \$1.35, but the printing bill ran \$60 over the budget estimate. This brought the total yearbook cost to \$745, an increase of \$124 over the original figures (460 x \$1.35). To compensate for this, however, the 40 extra students put an additional \$160 into the treasury.

The football team played six home games and three away from home. Of the six at home, only five were "money" games. The first game of the season is an annual battle with the alumni, and no admission is charged. However, since the officials, decorations and field upkeep must be paid for, this game always makes a drain on the treasury. The complete financial statistics on the football season is contained in the following table.

Opponent	Rec'ts	Given	Guar. Exp. of Trip
Delta*	\$167.75	\$125	
Bingham			\$143.72
Yerington*	186.40	150	
Las Vegas			217.73
Lincoln			
County*	160.50	75	
Sparks			124.32
Churchill			
County*	237.25	100	
West (Salt Lake)*	161.75	125	
*Home games			
Blanket expense (officials, field, fees, etc.)		209.32	
Guarantees received			550.00

The money that finances athletics at White Pine High School comes out of a general fund

Despite the fact that White Pine's two "big" games—against Yerington and Churchill County—were snowed under with an estimated loss of about \$200, the records showed a balance of \$193.56.

The actual football revenue from the student body fund averaged eight and a third cents per student per game, which is certainly a bargain. The basketball team received an average of ten cents per student for every game, while the track team hit the peak by collecting forty cents per student for the one home meet. The forty cents may seem unusually high at a first glance, but the \$200 allotted the track team paid the expenses for two trips, one to Provo and the other to Reno for the state meet.

The size of the guarantees given and received may surprise many readers. But Nevada, in addition to its boast of being a sound state, is also a large and not too densely populated state. White Pine's closest football rival is almost 135 miles away. Other excursions take the team to Salt Lake City, a distance of 250 miles; Reno, 340 miles; and Yerington, Las Vegas and Bingham, all over 300 miles.

Dance expenses

The school orchestra plays at all school dances, except the Junior and Senior proms. These two affairs are the only activities during the year which the students must pay for. However, they are very elaborate and formal, being considered the social events of the season.

School dances are held about every two weeks. While students are admitted free, it is customary to collect twenty-five cents each from outsiders (townspeople and alumni). The ten dollars allotted from the student fund pays for refreshments, decorations and various other items. Any surplus from gate receipts or other sources goes into the treasury and is credited to the account of the organization sponsoring the dance.

The student body treasurer must submit all bills to the student council and the faculty advisor for approval. Thus all receipts and disbursements are double checked.

There is no effort made to coerce the student into paying the activity

(Concluded on page 35)



**CATALOG
OF FALL STYLES IN
FOOTBALL
EQUIPMENT
FEATURING
GoldSmith**

STYLIZED COLORFUL FOOTBALL UNIFORMS

THE P. GOLDSMITH SONS INC.
CINCINNATI, OHIO U.S.A.



The author sinking a twelve-footer while practicing what he preaches. Keeping his head riveted to the ball, and

the club head always close to the ground, he taps the ball gently with a slow, steady, pendulum-like stroke.

PUTTING, GOLF'S SIMPLEST SWING

By Ben Thomson

The following tips on putting are passed along by Ben Thomson, famous Yale University coach and author of the text, "How to Play Golf," as an adjunct to his series of five articles in the November-March issues of Scholastic Coach.

THREE is an old saying in golf, "never up, never in"; very old and very true since the ball must be stroked hard enough to reach the cup. The cup will never move to meet the ball, but the beginner has to find this out for himself.

Putting is the simplest swing of the entire game. It is a stroke which any player should be able to perform with ease. But simple as it is, much depends upon the correct swinging of the club head.

Many different methods are used and all sorts of eccentricities. The number of different stances and grips are legion. Some of them are successful for the particular player, while others are not so good.

I recommend a fairly upright position, with the feet quite close together and slightly open, and the weight of the body comfortably placed on both feet. The grip changes slightly, but not enough to constitute a radical difference. The change is simply a turning of both hands so that the wrists will be facing each other.

The left arm should be rather close to the body, and the right forearm close to the right thigh. The position of the right forearm is the steady influence of the entire stroke. It makes it possible for the hands to swing the club head without any movement of the body, and at the same time, it makes it easier to keep the club head close to the ground throughout the swing. It also assists in keeping the right wrist perfectly square to the line of play.

I am a firm believer in the use of the right hand in putting. The left hand may steady the club, but the stroke is essentially a right-hand movement.

Before allowing the player to do any putting towards the hole, I let him try a few without any particular target, so that he may get the feel of the swing, and an idea of how far the ball will roll when hit with little effort. After this preliminary practice, he may play for the hole.

I impress on him the necessity for

always giving the ball a chance to reach the hole. To help him do that, I place a peg about six inches beyond the cup. He thus learns to hit up to or slightly beyond the hole. If we happen to be playing on a slightly undulating green, I show him how to find the roll of the green by squatting well back of the ball, keeping the ball in a line between himself and the hole. I then ask him to pick out some spot on the green between the ball and the hole and to play toward that spot, allowing for any roll the ball may take in following the contour of the green.

All putting greens will not be alike. I would suggest that the beginner start on a fairly level green.



STANCE: The body is fairly erect with the hands and arms quite close to the body. The ball is played from between the feet, or more toward the left heel.



GRIP: The fine sensitive touch that controls the club head throughout the entire putting stroke is applied by the forefinger and thumb of the right hand.

**TOOK YOUR ADVICE
BILL . . . RAWLINGS
HAS MY EQUIPMENT
ORDER AND I'M ALL
SET FOR 1940**

**GLAD TO HEAR THAT
JIM . . . AN OLD-TIMER
LIKE ME KNOWS IT PAYS
TO GET SET ON YOUR
EQUIPMENT EARLY**



It pays to have your equipment worries behind you when you get down to the serious business of practicing and mapping out your Grid Campaign . . . Greater demands have been put on the time element in the manufacturing of durable, quality equipment due to the highly individualized styles, designs, and color combinations now incorporated . . . Help us to give you service, early orders assure shipments well in advance of your first game . . . Order now and be all set when the first whistle blows.



Contact the Rawlings dealer in your territory. He will gladly outline the merits of Rawlings design, quality, and durability. Wide price range permits schools with any size budget to enjoy the advantages this better equipment affords.

ST. LOUIS

Rawlings

MISSOURI

Outdoor Track and Field Records at a Glance Up to Date

	○ NATIONAL INTERSCHOLASTIC RECORD	● NATIONAL INTERCOLLEGIATE RECORD	■ WORLD'S RECORD
100-YARD DASH	9.4s. Jesse Owens East Tech., Cleveland, O., 1933	9.4s. Simpson, Ohio State, 1929 Meier, Iowa State, 1930 Wykoff, So. California, 1930 Metcalfe, Marquette, 1933 Owens, Ohio State, 1935, 1936	9.4s. Frank Wykoff, U.S.A., 1930 Jesse Owens, U.S.A., 1935
220-YARD DASH (around one turn)	21.4s. Eugene Goodwillie Chicago Univ. H. S., 1923	NO INTERCOLLEGIATE RECORD AROUND A TURN	NO WORLD'S RECORD AROUND A TURN
220-YARD DASH (straightaway)	20.7s. Jesse Owens East Tech., Cleveland, O., 1933	20.3s. Jesse Owens Ohio State, 1935	20.3s. Jesse Owens, U.S.A., 1935
440-YARD RUN (one complete lap)	48.2s. Herbert Moxley Central H. S. (Columbus, Ohio), 1928	46.5s. Archie Williams California, 1936	46.4s. Ben Eastman, U.S.A., 1932
440-YARD RUN (straightaway)	48.2s. Frank Sloman Polytechnic H. S. (San Francisco), 1915	NO INTERCOLLEGIATE RECORD ON STRAIGHTAWAY	NO WORLD'S RECORD ON STRAIGHTAWAY
880-YARD RUN	1m.54.4s. R. L. Bush Sunset H. S., Dallas, Tex., 1933	1m.50.3s. John Woodruff Pittsburgh, 1937	1m.49.6s. Elroy Robinson, U.S.A., 1937 See note below†
ONE-MILE RUN	4m.21.3s. Louis Zamperini Torrance H. S. (Calif.), 1934	4m.6.7s. Glenn Cunningham, Kansas, 1934	4m.6.4s. Sydney Wooderson, England, 1937 See note below*
TWO-MILE RUN	See note below‡	9m.2.6s. Gregory Rice Notre Dame, 1939	8m.56s. Miklos Szabo, Hungary, 1937
120-YARD HURDLES 3 ft. 3 in. hurdles	14s. Joe Batiste Tucson, Ariz., H. S., 1939	14s. (Over 3 ft. 6 in. hurdles) Bob Osgood, Michigan, 1937 Fred Wolcott, Rice, 1938	13.7s. (Over 3 ft. 6 in. hurdles) Forrest G. Towns, U. S. A., 1936
200-YARD HURDLES 2 ft. 6 in. hurdles	22.1s. Don Pollom Topeka, Kan., H. S., 1938	22.6s. (Over 220-yd. course) Jesse Owens Ohio State, 1935	22.6s. (Over 220-yd. course) Jesse Owens, U.S.A., 1935
RUNNING HIGH JUMP	6ft.7 1/8in. Gilbert La Cava Beverly Hills, Calif., H. S., 1938	6ft.9 3/4in. Melvin Walker Ohio State, 1937	6ft.9 3/4in. Cornelius Johnson, U.S.A., 1936 David Albritton, U.S.A., 1936 See note below*
RUNNING BROAD JUMP	24ft. 11 1/4in. Jesse Owens East Tech., Cleveland, O., 1933	26ft.8 1/4in. Jesse Owens Ohio State, 1935	26ft.8 1/4in. Jesse Owens, U.S.A., 1935
POLE VAULT	13ft.9 5/8in. John Lanta Mansfield, Ohio, H. S.	14ft.11in. Earle Meadows, Univ. So. Calif., 1937 Bill Sefton, Univ. So. Calif., 1937	14ft.11in. Earle Meadows, U.S.A., 1937 Bill Sefton, U.S.A., 1937
12-POUND SHOT PUT	58ft. 10in. Elwyn Dees Lorraine H. S. (Kansas), 1930	NO. 12-LB. INTERCOLLEGIATE RECORD (16-lb.—Elmer Hackney, Kansas St. 55 ft. 11 in., 1939)	NO. 12-LB. WORLD'S RECORD (16-lb.—Jack Torrance, U.S.A., 1934 57 ft. 1 in.)
DISCUS THROW See note below*	154ft.9in. Edsel Wibbles Wolbach, Neb., H. S., 1937	173ft. Kenneth Carpenter Univ. So. Calif., 1936	174ft.2 1/2in. Willi Schroder, Germany, 1935
JAVELIN THROW	219ft. Robert Peoples Classen H. S., Okla. City, 1937	234ft. 1 7/8in. Robert Peoples Univ. So. Calif., 1936	253ft.4 1/2in. Matti Jarvinen, Finland, 1936
RELAY—440 YARDS	42.4s. Glendale H. S. (Calif.), 1928	40.5s. Univ. So. Calif., 1938	40.8s. Univ. Southern California, U.S.A., 1931
RELAY—880 YARDS	1m.28.2s. Polytechnic H. S., Los Angeles, 1931	1m.25s. Stanford, 1937	1m.25s. Stanford Univ., U.S.A., 1937
RELAY—ONE MILE	3m.21.4s. Hollywood H. S. (Calif.), 1929	3m.11.6s. Univ. So. Calif., 1936	3m.11.6s. Univ. Southern California, U.S.A., 1936
RELAY—TWO MILES	8m.5.5s. Roosevelt H. S., Des Moines, 1938	7m.38.1s. Indiana, 1938	7m.35.8s. National Team, U. S. A., 1936

○ Approved by National Federation of State High School Athletic Associations.

● Approved by National Collegiate Athletic Association.

■ Approved by International Amateur Athletic Federation.

* Prior to 1939 high school discus throwers competed with the same type of instrument used by college and A.A.U. athletes. Last season, however, schoolboys switched to an implement designed expressly for high school competition.

† The two-mile run no longer appears in the official records as compiled for the Track and Field Guide by the National High School Federation Track and Field Committee, E. A. Thomas, Topeka, Kans., chairman and national representative.

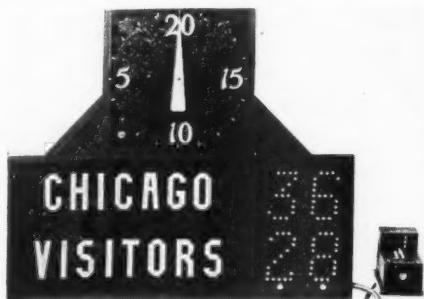
* Glenn Cunningham ran a 4m. 4.4s. mile, the fastest in history, on March 3, 1938, on the Dartmouth College indoor board track in Hanover, N. H. While this record was accepted as an American indoor mark, it was not accepted as a world's record by the I. A. A. F. because the international body does not recognize indoor marks.

† Three years ago at Stockholm, Sweden, Melvin Walker of Ohio State high jumped 6 ft. 10 in. to better a mark of 6 ft. 9 29/32 in. which he had created earlier in the same week. Neither his two record-breaking attempts nor his accepted intercollegiate record which ties the world mark, were given consideration by the I. A. A. F.

† On the Dartmouth College Indoor board track on March 14, 1940, John Woodruff raced 880 yards against a handicapped field in 1m. 47.7s., 1.5s. faster than the outdoor mark for which Sydney Wooderson has been awaiting official credit for two years.

THE BEST GIFT FOR A GRADUATING CLASS TO MAKE IS AN ELECTRIC TIMER AND SCORER

Members of the Class of 1940 will welcome their coach's suggestion of a scoreboard as their graduation present to the school



ALL-AMERICAN ELECTRIC SCOREBOARDS

Above board recently purchased by the Professional Chicago Bruins. Our boards have no moving parts other than clock hands. Scores set or changed instantly.

Full details on request.

DECKER MFG. CO., KEOUK, IOWA

\$50.00 CREDIT

on first order received from each state on any Model Board.

Model A \$167.50 Model F \$117.50
Model E \$197.50 Model DL . \$592

Boards complete with 50 ft. cable and control box.

Prices F. O. B. Edinburg, Ind.

*Wire or write Blanket Order
10 days to select Model Board*

THE SIMPLEX COMPANY
EDINBURG, IND.

(This offer opens April 10th)

ANNOUNCING

THE

"NEON-O-MATIC"

SCOREBOARD

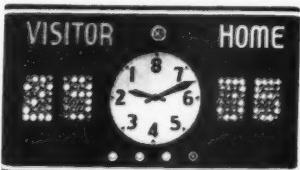
Nevco Pioneering Now Brings You A New NEON Scoring Device, Which We Are Certain You Will Recognize As The Finest Medium Ever Used For Game Scoring.

Write Today

NEVCO SCOREBOARD COMPANY

GREENVILLE - - - - - ILLINOIS

The NEWEST!



The FIGUREGRAM Basketball Score Board

The newest — and already the most popular! Everywhere installed, game attendance has increased amazingly! No other board like it! Has everything every other board has — PLUS! Don't buy until you have the facts about the FIGUREGRAM!

Write today for Descriptive Folder

J. E. PORTER CORP.
OTTAWA, ILLINOIS

STREAMLINED FAIR PLAY



Designed by engineers; Simplicity of construction operation. Most attractive design. Fair Play invites comparison. Models from \$69.50 to \$595.00.
FAIR PLAY MANUFACTURING CO.
University Station
Des Moines, Iowa



All Electric Scoreboards

*Economical
No Up-Keep
Easily Installed
No Moving Parts
Give Permanent Service
Guaranteed*

COSTS ONLY \$59.50 F.O.B.
CEDAR KRAFT COMPANY

Cedar Springs, Michigan

Write for Free Information

NAME _____

SCHOOL ADDRESS _____

Please send me information about the scoreboards made by the following companies:

- DECKER MFG. CO.
 J. E. PORTER CORP.

- THE SIMPLEX CO.
 FAIR PLAY MFG. CO.

- NEVCO SCOREBOARD CO.
 CEDAR KRAFT CO.



• FREE—this hand-some, authoritative chart consisting of ten drawings of muscles used in various sports, with names clearly printed on each drawing. Printed in two colors on cardboard—size 22" x 16".

Too much ACID in your Muscles causes that pain!

Fatigue acids settle in your muscles every time you overexercise. They make your muscle swell inside its sheath. You ache and feel stiff as a board.

DRIVE ACIDS AWAY!

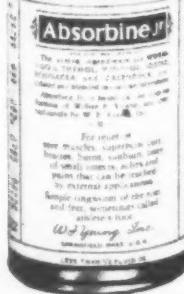
The smart thing to do is rub Absorbine Jr. thoroughly over affected parts three or four times a day. Laboratory tests prove Absorbine Jr. speeds blood through tissues . . . helps drive out those acids. Relief comes quickly. Use Absorbine Jr. after exercise. At all druggists, \$1.25. Millions like Absorbine Jr. because it is

- 1. QUICK ACTING
- 2. QUICK DRYING
- 3. PLEASANT
- 4. ECONOMICAL TO USE



At all druggists. \$1.25 a bottle. FREE SAMPLE—Write W.F. Young, Inc., 400D Lyman Street, Springfield, Mass.

ABSORBINE JR.



FAMOUS also
for Relieving
ATHLETE'S FOOT,
STRAINS,
BRUISES

←FREE SAMPLE BOTTLE

Competitive Volleyball Plan

By Frank Colucci

School men who are having trouble selling the game of volleyball to their intramural athletes may find some helpful suggestions in Frank Colucci's report on how he succeeded in popularizing the game at the McKinley Elementary and Junior High School in Flint, Mich., where he serves as physical education director.

PROBABLY every physical education director at one time or another has been faced with the task of selling the game of volleyball to students of junior or senior high school age. Having rarely seen the game played properly, the students have a tendency to regard it as a "sissy" game, and won't play it unless it is prescribed by physical education law.

At McKinley, before we succeeded in awakening the students to the possibilities of the sport, interest in it was at a low ebb. Volleyball had been played for a long time as an intramural sport but met with little success as far as getting the boys to turn out for their home room teams.

Under our intramural code, a home room may have as many boys on the team as show up, but no game can be played unless at least five appear. Even under this lenient setup, many games were being forfeited.

Stroke of genius

Realizing the need for a bracing agent, we searched about for some means of creating interest where little or none existed. The cause of failure was simple enough to determine. The sport, as presented, was not appealing to the competitive instincts of the boys, a force of considerable power in adolescent youth. Our main objective, then, was to cloak the game somehow with the competitive aspect of the more highly respected sports as basketball and baseball. With this in mind, we refurbished our volleyball program to stress the competitive angle.

The gymnasium classes were used for the experiment. Since there are four classes of six squads each, we had 24 squads or teams to work with. A regular round-robin schedule of games was drawn up for each class, and three full rounds were played, constituting 15 games for each team.

At the conclusion of the third round, the teams that finished with a .500 standing qualified for the class championship. This title was decided by a series of the best two

out of three games in each class. The class champions, numbering four in all, then competed for the all-round gymnasium championship. These games were played after school hours so that everybody could see them. A regular round-robin schedule was observed, the team winning the most games ascending to the throne.

Cross-court layout

We found it advisable not to have over six teams in each class. With six teams, the playing courts were always occupied and no team was idle. All games were played on cross courts, two nets being placed down the center of the gym floor, parallel to the sidelines. A high jumping standard was used at the center to attach the two nets, and the center, side and end lines constituted the boundaries.

The entire 15 games were played without any interruptions in the form of other gym class activities. It was thus possible to play an average of five games each period. Naturally many periods ended before the last point had been decided. Where this occurred, any team with an eight-point lead or more automatically won the contest. If less than eight points separated the teams, the game did not count and was played off at a later date. The daily standings were posted on the bulletin board where they could easily be seen by everybody.

This is the way we worked out the salvation of volleyball at McKinley. After stirring up interest in the gym classes, we began scheduling games after school hours between the home rooms. Where we had difficulty getting five boys to turn out for volleyball, we now have an average of over 8 players showing up after school is out. It has not been necessary to forfeit a single game.

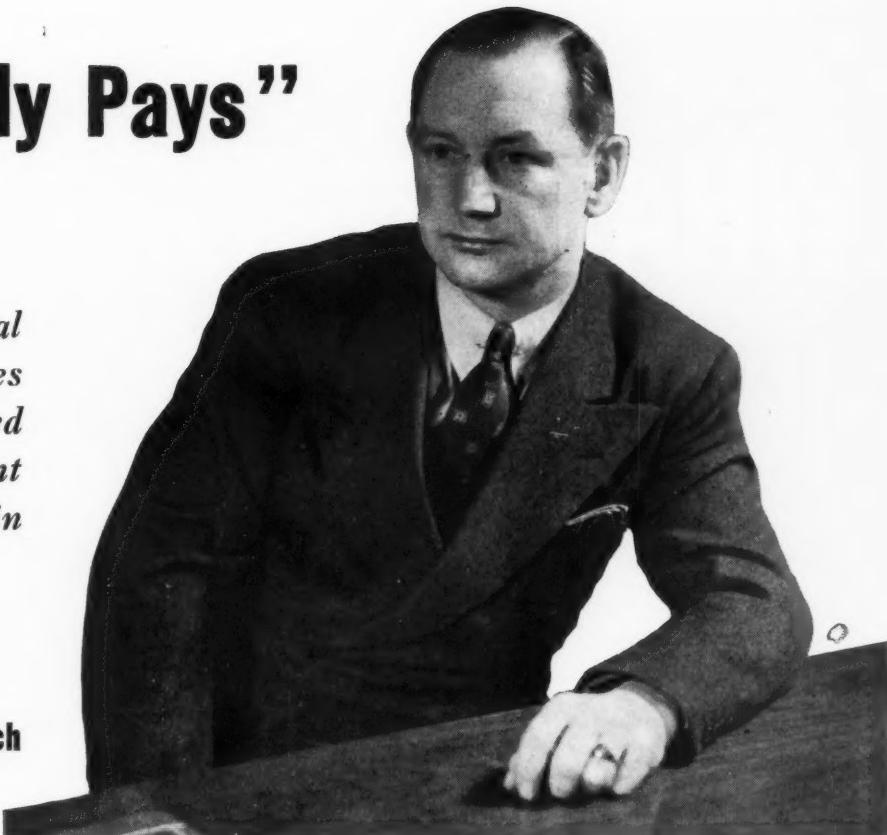
We have found the program quite simple to administrate. For one thing, the space required per player is less than for any major team game. The only equipment required (ball, net and standards) is inexpensive, easily cared for and, when properly handled, lasts for more than one season. We have also found that chances for injury are few in this game, and that it has a definite value in developing good postural habits.

"Buying Early Pays"

The most annoying annual problem of many coaches would be completely solved if their football equipment orders were placed early in the Spring—

says

**G. Herbert McCracken,
Publisher of Scholastic Coach**



FOOTBALL may seem like a long way off, but our far-sighted coaches are already on the job. They are placing their football equipment orders NOW. Thus, when the season rolls around, they will be able to throw all their energies into the task of drilling and conditioning their squads. The man who delays his order until June or July is exposing himself to unnecessary grief in September. He cannot concentrate on his work when he has to worry about whether the equipment he ordered will arrive on time for the first game or whether all the sizes as figured in advance will fit the squad. If his equipment is there and waiting for him when he reports the last week in August, he has an opportunity to check and approve it. He has time to order the few extra shoe sizes he now figures he'll need, to change numbers from one jersey to another and to attend to the host of adjustments that are always necessary.

May I take the liberty of again reminding you that it pays to play ball with the manufacturers by

ordering your equipment early in the spring. You may not know all the sizes of the helmets, jerseys, shoes, or pants you will need, but you do have most of this information from the previous year. You can at least place a partial order so that the manufacturer can get under way. The manufacture of modern equipment demands more in the way of time and workmanship than ever before, for not only do schools and colleges demand equipment that is serviceable but many insist upon unique design and intricate color combinations. You can be sure of superior merchandise if you place your order early. Your cooperation with the manufacturers is your guarantee of a quality job at a fair price with prompt delivery.

In this issue and other spring issues of SCHOLASTIC COACH, various manufacturers will announce and display their 1940 line of equipment. Cooperate with them by giving them your order early this spring. It will facilitate the job of the manufacturers and insure delivery of your equipment well in advance of the season.

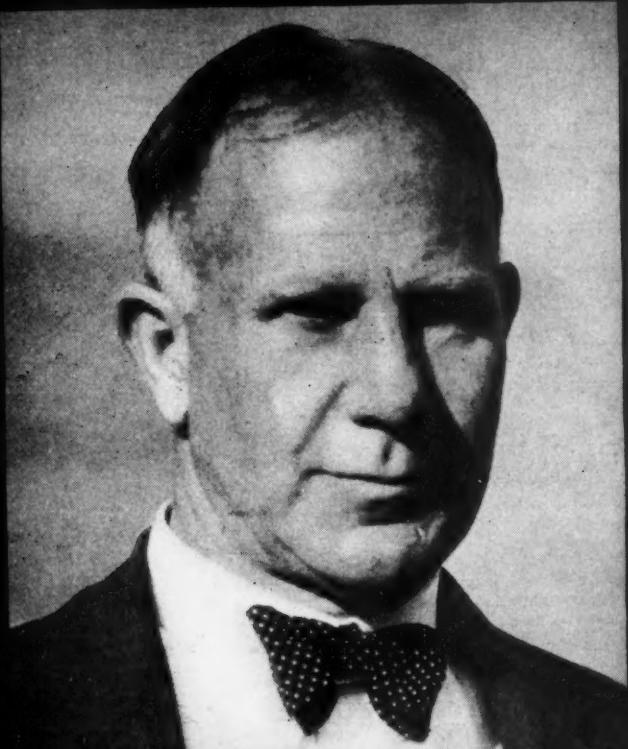
WHAT *Riding*

Strengthens
BICEPS
FOREARM
STOMACH
FINGERS
THIGHS
CALVES
ANKLES

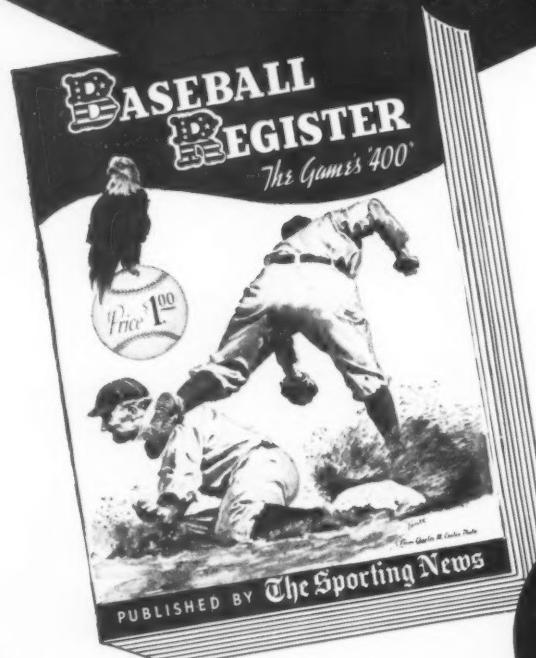


Bike WILL DO FOR YOU

by
Dean Cromwell



**CHECK YOUR FAVORITE
STAR'S PERFORMANCE
THIS SUMMER BY
CONSULTING THEIR LIFE-
TIME RECORDS IN..**



BASEBALL REGISTER

FIND out almost anything you want to know about any established player in the majors, by referring to their records in the Baseball Register! Learn important personal facts about them, too; see their autographs, and close-up and action pictures—by looking in the Baseball Register!

This big, 224-page book gives all this hard-to-get information about the game's "400"—339 at present active in the majors and 61 all-time stars, many of whom are now important coaches and managers.

This wealth of facts and figures is thoroughly accurate, fully authentic and complete to the end of the 1939 season. Over 5,000 letters were written to players, requesting and verifying information. Four

statisticians—three proofreaders—worked six months at compiling this data and checking.

This stupendous effort produced a book such as never before seen; like nothing that has ever existed previously. Yet you can get the Baseball Register for just one dollar, postpaid—the coupon brings it to you by return mail!

THE SPORTING NEWS

10th and Olive Sts., St. Louis, Mo.

Enclosed find remittance for one dollar (\$1). Please rush a copy of the BASEBALL REGISTER to

Name

Street

City

Outguessing the Batter

(Continued from page 17)

base, the pivot foot should be in contact with the rubber* and the body facing the batter. The spikes on the ball of the pitching foot (the right foot for a right-hand thrower, the left foot for a southpaw) extend over the front edge of the rubber. The arms hang at the sides with the ball in the pitching hand slightly to the rear of the thigh.

This position is also taken with third base, second and third, or all the bases occupied. In all other situations, the pitcher assumes a side-ward position on the mound and faces the batter from his left side (for right-hand pitcher). The pivot foot is still on the rubber but the other foot is now placed in front of the rubber.

The arms are bent so that the elbows are over the hips and the hands meet in a comfortable position directly in front of the body above the belt buckle. The ball is well covered by the glove to conceal it from the batter and the head is turned slightly toward the runner that is being checked. If a runner on first is being checked, the pitcher should watch him from over his left shoulder. Many inexperienced pitchers make the mistake of watching the runner from over the right shoulder, requiring a swing all the way around to throw to the bag.

With two men on base

With two men on base, the runner furthest advanced should be watched the closer although the other should not be completely ignored, especially if he is in a position to steal a bag. Just prior to assuming the stance, the pitcher should stretch his arms overhead and loosen the garments around his shoulders and elbows. Before throwing, however, he must bring his hands back to the regular position.

After releasing the ball, the pitcher should follow through in such a manner that perfect balance is maintained. When the ball leaves his hands, he should assume a position in which his back is almost parallel to the pitching plate. This is necessary for protection against hard-hit balls, and to go to either

*Prior to 1939, the pitcher's back foot was also supposed to be in contact with the rubber. Last year, however, the rules were changed so that the pitcher could place his back foot anywhere behind the rubber. The latest change now allows him to take two steps in delivering the ball, providing his front or pivot foot does not leave the rubber; i.e., he may step back and then forward with the other foot.

side to field grounders or bunts.

Many beginning pitchers have a habit of following the pitch with a few steps toward the catcher. Over the course of the game, this habit represents a tremendous waste of energy. The pitcher should stand in his regular follow-through position until he receives the ball from the catcher. He should then retreat to his preliminary pitching position behind the rubber, get the sign and come into pitching position with one step forward.

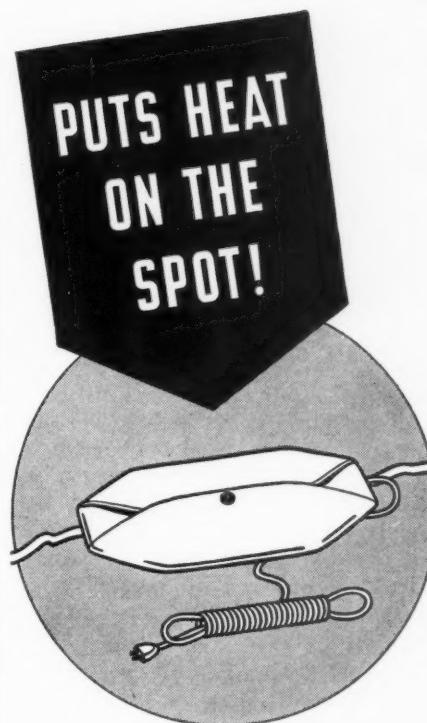
The warmup

As a general rule, the pitcher should take a ten to fifteen minute warmup before the game. This should be timed so that the boy is ready to pitch at game time. He begins with easy throws and increases his speed gradually. After limbering up slowly for about five minutes, he may toss a hook. The first curve should not be a hard, sharp-breaking pitch, but merely a spinning ball. The boy should work into his curve by degrees, first spinning the ball and then working up to a real curve.

Once this has been accomplished, the pitcher can cut loose with his entire repertoire. It is advisable to throw the assortment in a series, throwing five hard ones in a row and following with the same number of curves and slow balls. When he is ready to switch from fast ball to curve or from curve to slow ball, the pitcher should signal the catcher so that the latter always knows what is coming. It is a good idea to aim the warmup tosses for the corners, both low and high, just the way he will pitch in the game.

The pitching arm should never be exposed when it is not in actual use. Upon coming to the bench between innings, the boy should immediately cover up. Most coaches supply jackets for this purpose. The garment protects the flipper from chills and sudden drying out, both of which bring on sore arms.

When the pitcher becomes a base runner, the game should be held up while a teammate runs out with his jacket. The pitcher should never slide, unless absolutely necessary, or try to stretch a hit. Nine innings are a long way to go, and the boy who is doing the throwing cannot afford to squander his energy recklessly. He must hold something back for the late innings.



Charley Pad HEAT BANDAGE

Latest Spot Heat Treatment for Any Part of the Body

Charley Pad — is the easiest way to apply moist or dry heat to injured athletes. Small, compact, conforms to muscular contour. Ties in place or sticks with adhesive tape.

Charley Pad — saves time . . . releases Rubbers and Trainers for other duties. Allows freedom of motion during treatment. Can be used in training room, dormitory or home wherever there is A. C. current.

Charley Pad — has thermostatic temperature control, adjustable to individual comfort. Anyone can use it. The only convenient means for moist or dry heat application. Fills a long felt need for injury treatment.

Chase your charley horses off the squad with Charley Pad. Price \$3.50 postpaid anywhere in the U. S. A. Money refunded if not satisfied . . . Order from

THE SIMPSON COMPANY
Dept. 12, MINNEAPOLIS, MINN.



COMPLETE AND PARTIAL ROUND-ROBINS

By E. R. Elbel

Dr. E. R. Elbel, associate professor of physical education and supervisor of intramural sports at the University of Kansas, describes several methods of building round-robin and partial round-robin tournaments.

SCHOOL men who are charged with the responsibility of scheduling intramural athletic contests will find the use of simple techniques in devising various forms of tournaments invaluable. In the physical education program there is an increasing tendency to use round-robin and similar forms of tournaments in preference to the elimination type. The elimination tournament is a device for determining the champion in the shortest possible manner, while the round-robin provides the maximum participation over a longer period of time.

While every tournament meets a particular need, those which allow the maximum amount of play, considering time and facilities, are more compatible with the educational aims of the program than those types which eliminate a defeated team from further competition.

In constructing the round-robin and similar tournaments, it is advantageous when possible to use a method in which the proper number combinations and the correct order of play are accomplished in a single operation. It goes without saying that when numbers are used to represent the teams, the team names can be substituted for the numbers after the draw has been completed.

A single method cannot be used for both odd and even numbers of teams. In the tournament involving an odd number of teams, one team will remain idle in each round of play. Several years ago Julius Kuhnert* described a simple and logical method of building round-robin tournaments involving an uneven number of teams. This is frequently referred to as the "rotation method."

In this plan the mid-number is the team that does not play in the first round. For example, if nine teams are involved, number 5 is the team that will draw a bye.

To make the pairings, place number 1, 2, 3, and 4 in a column at the left, one under the other, then draw a line and place number 5 under it. Now proceed upward in a column to

The proper number combinations and the correct order of play should be accomplished in a single operation

the right of the first one with 6, 7, 8, and 9. The pairings thus obtained are: 1-9, 2-8, 3-7, and 4-6. As mentioned previously, 5 does not play in this round.

To arrive at the next series of combinations, all numbers are shifted counter-clockwise one position, i.e., 9 goes to the top of the left hand column, 4 below the line and 8 to the top of the right hand column. This procedure is followed until the 2-1 combination appears at the top of a series. The completed tournament will be as follows:

1-9	9-8	8-7	7-6	6-5	5-4	4-3	3-2	2-1
2-8	1-7	9-6	8-5	7-4	6-3	5-2	4-1	3-9
3-7	2-6	1-5	9-4	8-3	7-2	6-1	5-9	4-8
4-6	3-5	2-4	1-3	9-2	8-1	7-9	6-8	5-7
5	4	3	2	1	9	8	7	6

The games are played by starting with the 1-9 combination and proceeding downward. After the first series has been completed, the next series (to the right) is played in the same order. One objection to this method is that the number 5 team, having drawn a bye in the first round, is not scheduled until the final game in the second series.

If all four games in this series

1-10	1-9	1-8	1-7	1-6	1-5	1-4	1-3	1-2
2-9	10-8	9-7	8-6	7-5	6-4	5-3	4-2	3-10
3-8	2-7	10-6	9-5	8-4	7-3	6-2	5-10	4-9
4-7	3-6	2-5	10-4	9-3	8-2	7-10	6-9	5-8
5-6	4-5	3-4	2-3	10-2	9-10	8-9	7-8	6-7

cannot be played in one day, the fifth team, not having played in the first series may become impatient and start clamoring for action. The remedy is simple enough—substitute the 3-5 combination for one of the others above, perhaps the 1-7 game. If all four games can be played in one day, no difficulty will be encountered.

Perhaps the most common method used in the construction of round-robin tournaments involving an even number of teams has also been described by Kuhnert. This method is somewhat similar to the aforementioned type, with an uneven number of teams, but in this instance it is necessary to keep one number in the same position throughout, while the remaining numbers are rotated. Number 1 is most frequently kept constant.

For example, in a tournament involving 10 teams, the first series of numbers will be matched the same way as before. But since there is no

odd number, each team will play in every round. Proceeding downward, numbers 1, 2, 3, 4, and 5 will form the left-hand column, and 6, 7, 8, 9, and 10 the right-hand column. The first matchings will thus be: 1-10, 2-9, 3-8, 4-7, and 5-6.

The second series is started by shifting number 10 to the second position in the left-hand column (number 1 remaining constant in the top position). The next number is 2, followed by 3 and then 4. The right-hand column, reading from the bottom up, will consist of num-

bers 5, 6, 7, 8, and 9. This procedure is followed throughout the nine possible series of combinations.

It may be helpful if, after having completed the first series, the total combinations for number 1 are placed in position for each series. These combinations will be 1-10, 1-9, 1-8, 1-7, 1-6, 1-5, 1-4, 1-3, and 1-2. The completed tournament will be as follows:

The correct order of play in this tournament is to start with the first combination in the left-hand series and proceed downward.

E. Boyd Graves* suggests another method of devising a tournament involving an even number of teams. This method is simple and is preferred by some. Using 10 teams, it may be explained as follows: Take half of the number of teams in the tournament and place them at equal intervals, starting with number 1 and proceeding in order from the left to the right of the sheet. Then return to the left with numbers 6, 7, 8, 9, and 10, placing them in order at the right of the numbers which were first placed in position. We arrive thus at the following:

1-10 2-9 3-8 4-7 5-6

*E. Boyd Graves, *Journal of Health and Physical Education*, Vol. 2, January 1931, p. 44.

(Continued on page 48)

Marty Gilman PRODUCTS ARE SOLD ONLY FROM THE FACTORY

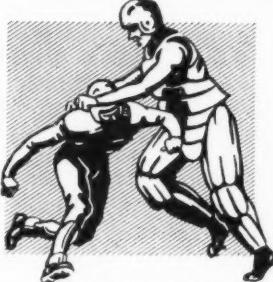
The only way to get Marty Gilman Gear, with patented Gilman features, and to save dealers' profits is to buy direct from Marty Gilman.



COMEBACK

Price: \$55.00 and \$66.00

Used especially for downfield blocking. . . . Picks itself up. . . . Individual development. . . . Portable. . . . Waterproofed, built to last for years. . . . Offers right amount of resistance.

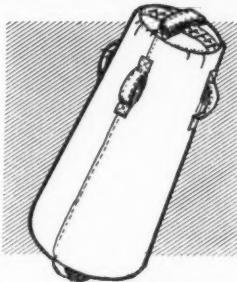


FIGHTBACK

Prices: From \$7.50 up
No other company in the world has the right to manufacture or sell Fightback.

(Reg. U. S. Patent Office)

Designed to reduce risk of injury in practice. . . . Protection pad for both blocker and defensive player. . . . Full speed blocking without danger of bruises.



STANDBACK

Prices: From \$8.00 up
Shells unfilled, from \$3.50 up

Unexcelled standing dummy. . . . Indispensable for all blocking drills. . . . Secretly developed material and process of packing ensures longest possible usage. . . . Lightweight.



PNEU COMEBACK

Price: \$30.00

Dual purpose dummy. . . . Has all advantages of Comeback in pneumatic form. . . . Weighs only 60 pounds and up. . . . Always stands up, never lying. . . . Releases men (helpful with small squad).

Ask for New Catalog

Marty Gilman ~ GILMAN, CONNECTICUT

Originator and Manufacturing Specialist of Football Dummies
ERNY PINCKERT, Los Angeles, Cal., WEST COAST REPRESENTATIVE

PAGE

STAINLESS STEEL
TENNIS NETS

are better in every way

Tennis officials everywhere have been quick to accept the many advantages of Page Stainless Steel Tennis Nets.

Canvas top and center strap afford same conditions as a cord net. Tension can be regulated to control ball rebound without affecting net height. Wires are light—yet strong—and made of Stainless Steel to resist destructive climatic conditions. Maintenance and replacement costs are reduced to a mini-

mum because Page Nets will remain in place indefinitely without deteriorating. Wires are smooth—ungalvanized—to prevent injury to balls and players. Special reel attachments are available for use on existing wood or steel posts.

Further details and special folder on request—write

PAGE STEEL AND WIRE DIVISION
AMERICAN CHAIN & CABLE COMPANY, INC.
MONESSEN, PENNSYLVANIA



• Page Stainless Steel Tennis Nets installed at Bainbridge Park, Bronx, N.Y. Photo through courtesy of the New York Park Department.

The OUTDOOR SEASON is here!

Baseball, track, spring football, and host of other outdoor activities will take their toll of sprains, strains, etc.

PROTECT your players with ACE BANDAGES! It is the accepted method of preventing many of the common athletic injuries.

Send for the Ace Athletic Manual if you haven't already received one. You will find it useful in the care of athletes.

Have you tried the new ACE ELASTIC ADHESIVE for strapping, sprains and muscle injuries? Send for sample.

ACE BANDAGES

Elastic Without Rubber

Sold through Sporting Goods Dealers
and Drug Stores

TECTON, DICKINSON & CO.
Rutherford, N. J.

Training Schoolboy Catchers

(Continued from page 13)

the first base side, the catcher makes his play like an infielder. If he has time, he may straighten up. If not, he throws with a sidearm or underhand motion.

The eyes should never be taken from the ball until it is firmly grasped in the throwing hand.

Fly balls

The catcher lets the infielders catch all fly balls they can reach. When a fly ball is raised near the plate, he should try to get under it so that it will apparently hit him on the head when it comes down. He may thus either step forward or step backward to make the catch.

The wind, the sun and the direction the ball is hit are all factors which will influence the actual catch. On balls thrown inside to a right-handed batter, the pitch is likely to be fouled directly over the catcher's head or to his left. At the sound of the hit, the catcher should whirl to his left, discard the mask and look up for the ball.

After pivoting, it is advisable to take the first step with the left foot. If the catcher crosses his feet, he may entangle himself and lose precious seconds chasing down the fly. The second step may be used to change direction, if necessary.

On a fouled outside pitch, the rule is reversed. Since the ball will usually slant off to the right, the catcher should pivot to his right and step out with the right foot.

On many fly balls near the plate, one or more of the infielders may also go after the ball. If the catcher has position on the ball, he may "call off" the first or third baseman by yelling, "I've got it!" If he has made a late start and an infielder is in better position, the catcher should tell him to take it. He may yell, "All yours!" or "lots of room!"

If two infielders start after the ball, call out the one who can make the putout more easily. In case of doubt, call upon the steadier of the two. With one or more men on base, and the first or third baseman attempting the catch on a hard run, post him on the throw to be made. The infielder frequently "spends" himself in the effort or may find himself in an awkward position to throw. The catcher may help him out by shouting, "Third!", "Second!", or "No throw!"

Most boys can take care of themselves in the matter of discarding

the mask. They know without being told that there is less chance of injury if the mask is thrown out of the line of flight. With a little practice, the movement becomes automatic.

If the ball is hit high just overhead or anywhere near the plate, the catcher should slide the mask off his head, locate the ball and then fling the mask in the opposite direction. If the ball is some distance from the plate, the catcher may allow the mask to fall backward as there will be no danger of stepping on it.

There are several other situations in which the mask must be discarded. The catcher should slide it off his head and let it fall backward prior to receiving a throw from a fielder, and when it is necessary to leave the plate to field hit balls, retrieve pitched balls and to cover first and third or back up first.

Defense throwing

Few young catchers know exactly how to deport themselves with men on base. A smart receiver studies the runners and knows who are the slow men and the fast men. He also takes into account the score, the inning, the strength of the batter and the count on him.

With a man on second, he should never indulge in any random throwing, except, of course, when the runner is loafing or dropping his head every time the ball is returned to the pitcher. When a runner is on third, there is small chance of catching him napping. Any throws should be aimed to the inside of the bag to facilitate handling by the baseman.

With runners on first and second, the catcher should never try to pick off the runner on first. This is a dangerous play since the runner on second can easily make third and even score if the throw to first is wild.

Probably the most difficult throwing situation for the catcher is with men on first and third and a double steal in the offing.

As a general rule, he should first catch the ball and then shoot a quick glance at the runner on third. If the runner has a short lead and obviously intends to stay on the base, the catcher should throw to second. The second baseman should be about halfway between the base and the mound. If he perceives the runner on third breaking for home,

he cuts off the throw and pegs home to the catcher. If the runner on third does not break, he allows the throw to go through to the shortstop covering second.

When the runner on third takes a long lead and shows an inclination to break for the plate, the catcher can bluff the throw to second and snap the ball to third.

The third alternative is seldom employed in big league baseball but may be used effectively in high school or college ball. After receiving the pitch, the catcher makes a snap throw to the pitcher about shoulder high. If the runner on third is fooled by his motion and throwing direction, he may instantly start home only to be nailed by the pitcher's return throw to the plate or run down between the bases. If the runner hugs his base, the pitcher may wheel and throw to second.

The usual play sequence following a force putout at the plate is a throw to first. It is rarely possible to nail a runner advancing to second or third because of his lead and quick break.

On wide throws, leave the plate for the catch instead of reaching for the ball. If it is still possible to get the runner, dive with outstretched arms and lay the ball on the third base side of the plate, forcing the runner to slide into it.

General suggestions

When a pitcher is wild, slow him up; talk to him if necessary; accent the target.

On good open fields, there are times you may pitch to a batter's strength. When you do, wave the outfield back.

Since the entire defense is in front of you, check to see they are properly aligned. Call them in, move them out, etc.

Watch the baseline coaches in the hope of intercepting a sign.

When in doubt, post the pitcher and the first or third baseman as to his duties.

Know what type of ball the batter hits in his first time up and don't let him see it again.

Know your pitcher's best ball; in the clutch, use it.

On a throw to the plate which the runner has beaten, yell "Cut it off!" to the first or third baseman if he is in position to intercept the throw. On accurate throws, call "Let it go!"

With the bases unoccupied, the catcher should back up first on all batted balls that might result in overthrows on the plate side of the base.

Activities Budget

(Continued from page 20)

fee. The fact that about eleven dollars worth of activities and the Annual are received for four dollars is the big selling point. If the student refuses to pay the activity fee, the school keeps his \$1.50 book deposit. This covers the cost of the yearbook. The rest is charged off the books. During the several years this plan has been in operation, the student body has cooperated 100 percent.

They have been able to finance

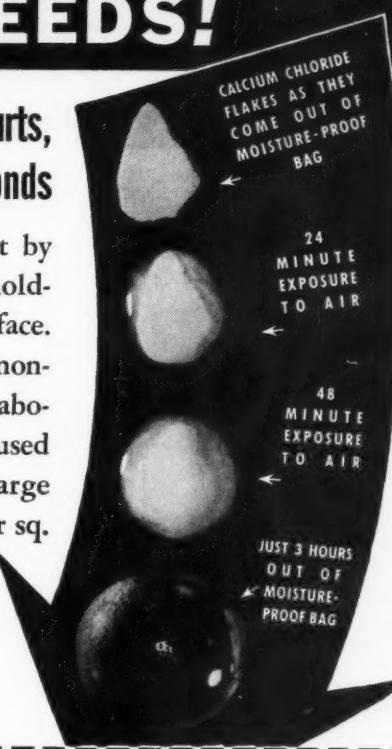
their activities easily, with all deriving the benefit of participating in school affairs.

If this plan will function in a school with such heavy athletic expenses as White Pine, it should certainly work for schools that are relatively closer to their opponents and do not have heavy guarantees and expenses to meet. Almost any school administrator, by applying a little thought to the problem, should be able to adapt this plan to meet his own school needs. He will be well repaid for his efforts in surcease from the worries that usually go with the job.

CLEAN, WHITE, ODORLESS FLAKES THAT— **END DUST AND WEEDS!**

ON Athletic Fields, Tennis Courts, Playgrounds, Ball Diamonds

Solvay Calcium Chloride ends dust by absorbing moisture from the air and holding the resulting solution in the surface. It is colorless, odorless, harmless, non-staining. No previous experience or elaborate equipment are required. Can be used on practically all unpaved surfaces—large or small areas. Costs only 2¢ to 4¢ per sq. yd. per season. Keeps surfaces resilient—prevents sun glare and cracking. Used for over 25 years by schools, camps, parks, tennis clubs.



**SOLVAY
CALCIUM
CHLORIDE**

SOLVAY SALES CORPORATION • 40 Rector Street, New York, N.Y.

Gentlemen: Kindly send me a copy of your new booklet on Ending Dust.

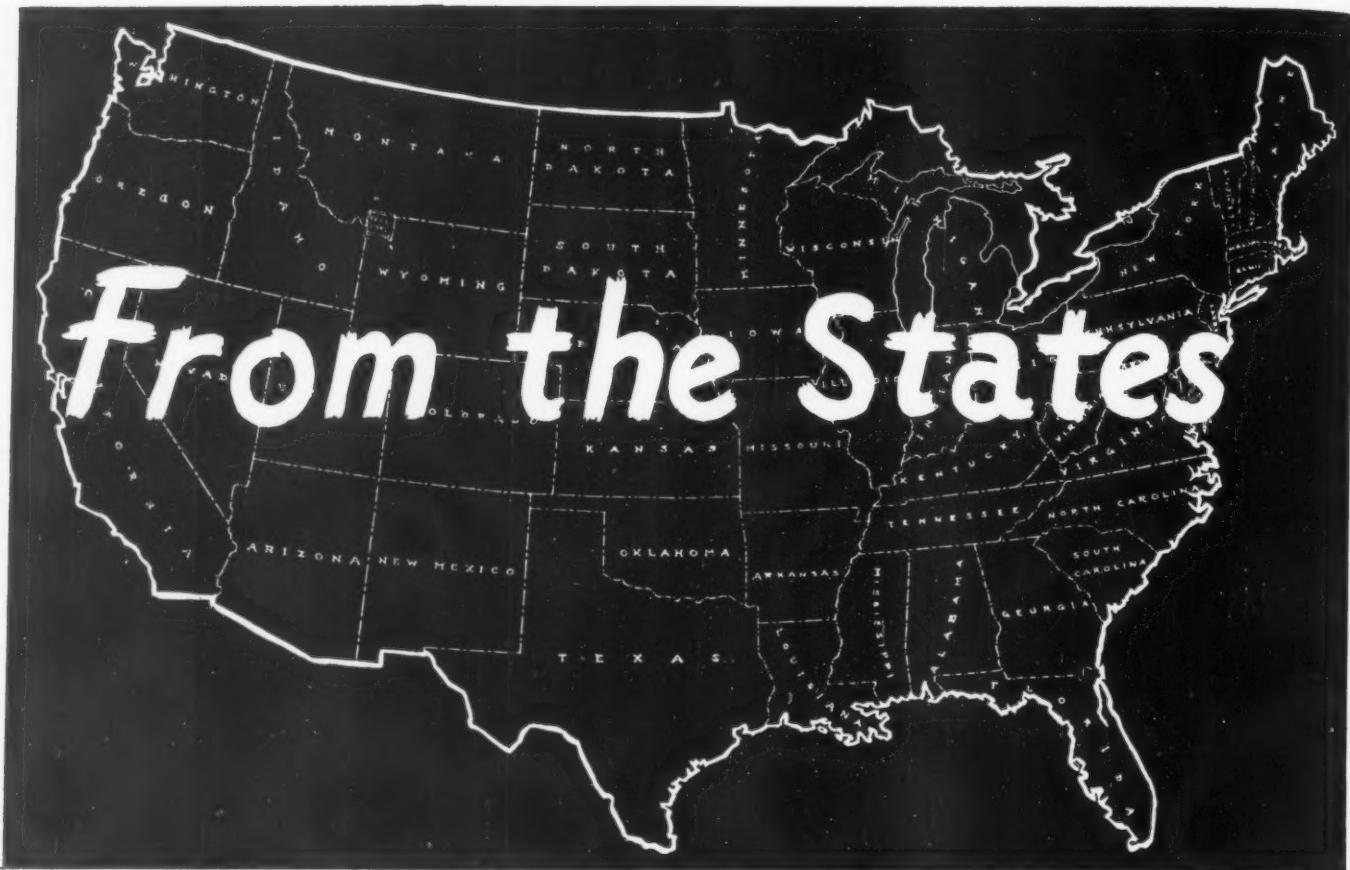
Name.....

Position.....

Affiliated with.....

Address.....

City..... State..... 42-440



This department includes correspondence from state high school coaches, associations and state high school athletic associations. All associations are invited to participate.

National Federation Notes

THE National Federation will enter a new phase of its evolution when an independent office with a full-time executive officer is opened on September 1 in Chicago.

The organization probably represents the world's largest body of organized athletic groups and men. All of the high schools of the member states are organized in conferences and county groups and these are in turn a part of well organized state high school athletic associations. The work of these state associations is co-ordinated and articulated through their membership in the National Federation. This is an almost perfect set-up for a year-round program of planned experimentation in the various sports, organized collection of statistics and sentiment, and ultimate action to improve game administration and to insure the proper relationship between the athletic departments and other departments of the school system.

The most recent entrant to the ranks of Federation states is California. The schools of this state are organized in several sectional groups because of the size of the state. These sectional groups belong to the California Interscholastic Federation. Consequently the entrance of California into the National Federation results

in a Federation within a Federation. However, for all practical purposes, the relationship of the California Federation to the National Federation will be the same as that between any other state and the Federation. The officers of the California Federation are H. J. Moore, Long Beach, president, and A. B. Ingham, Pacific Grove, secretary-treasurer.

It is interesting to note that the larger cities of Arizona are also a part of the California Federation. This enables them to secure competition with schools that are approximately their own size.

One of the most recent significant activities of the California Federation is the adoption of an athletic protection fund. During the past football season, 139 high schools obtained protection under this plan; 2663 boys were covered for the football season at one dollar per boy; 4247 boys were covered for all sports at \$1.25 and 859 boys were covered for all sports except football at seventy-five cents. This makes a total of 7769 boys who had protection in one or more sports. To date the protective plan seems to be working satisfactorily and has met with the approval of the schoolmen.

The 1940 Interscholastic Football Rules Book will carry insertions in the proper sections of the rules to show what modifications are necessary for the six-man game. Heretofore, the modifications were listed in a special four-page section in the back of the eleven-man rule book.

Representatives of the National Federation Football Committee met with Stephen Epler and several of his

football group in Chicago on March 22. Various matters relative to the six-man rules were discussed. Mr. Epler will continue to issue a handbook for six-man football, which will include diagrams of special six-man formations.

The six-man game has become quite popular in several of the northwestern states and in Florida and Georgia. In Montana and North Dakota, many teams which once played eleven-man football have substituted the six-man game. One reason for this is the great expense connected with the eleven-man game when full teams must be transported several hundred miles for a game. Roy Wood of Butte, Mont., is chairman of the sub-committee that is responsible for the six-man rules as outlined in the National Federation football rules book.

The season of 1940-41 will mark the fiftieth anniversary of the game of basketball. The National Federation and similar groups will consider plans for commemorating the event. Basketball probably has had the most rapid growth of any of the sports. It has become the national game as far as high schools are concerned. It comes at the proper season, it does not involve excessive expense for equipment, the various skills involved are particularly adapted to boys of high school age and great numbers of students are given a chance to compete.

The National Basketball Committee met in Kansas City on March 30 and 31 to draw up the rules for 1940-41. The high schools were represented by four members appointed by the National Federation. Work is now be-

ing done on the new code of rules and the interscholastic edition will be ready by June 1. There will be a special coaching school edition which may be secured by colleges and universities that conduct summer coaching schools. These may be secured direct from the National Federation office.

The various state high school athletic associations will use the interscholastic edition of the rules book and the basketball play situations book. The state associations supply such books to their registered officials and member high schools. Others may secure the almanac edition of the guide which is published during the fall.

North Dakota

Mandan lifts crown

A NEW Class A basketball champion was crowned when Mandan, coached by Francis Grunenfelder, defeated Bismarck to take over the crown won last year by Jamestown. This marks the first time the Mandan team has won the state title in basketball, although teams representing that school have reached the finals on several occasions. Bismarck proved to be the "dark-horse" team of the tournament. On its season record, Mandan did not rate highly but it managed to fight its way into the finals.

Another event, the 440 yard sprint relay, will be added to the list of events on North Dakota track programs beginning this year. The only other relay on the program at the present time is the 880 relay. Both of these events are special features of the meet and do not count for points but are contested for special trophies.

At the annual meeting of the Coaches' Association during the state Class A basketball tournament, Coach Francis Grunenfelder of Mandan was elected president to succeed Coach Johnny Mach of Williston. Stafford Ordahl of Devils Lake was elected vice-president, succeeding Charles Solberg of Fessenden and George Newgard of Hillsboro was re-elected secretary-treasurer.

JOHNNY MACH,
North Dakota Coaches Assn.,
Williston, N. D.

Vermont

Little Indians big noise

BASKETBALL is over for another year. The regular season was marked by the first year of play of the Southern League, made up of A schools, and already claimed by the southern end of the state to be the equal of the long established Northern League.

The Southern League was won by Dick Hanley's smooth, high-scoring Hartford team which lost but two games. However, the Hartford machine passed its peak before tournament time, and dropped out of both



Majestic oxford

Devlin oxford
(the new shoe
for Badminton)



REG. U. S. PAT. OFF.
Keds
United States Rubber Company

Rockefeller Center • 1230 Sixth Avenue, New York

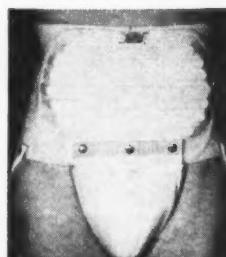
They are not Keds
unless the name Keds®
appears in the shoes.

Here's DOUBLE PROTECTION



BILL MATTHEWS

ABDO-GARD protects the abdominal area with a flexible wall that folds as the body bends . . . has an 8" elastic waistband that holds the ribs and lumbar area in place . . . allows free body motion . . . gives complete protection against vicious impacts . . . is constructed of exceedingly high grade material with a strong tension . . . guaranteed to give good wear and launder well . . . a protective cup may be placed in the pouch pocket, giving full protection without an additional garment . . . weighs about 12 oz. complete.



Complete Outfit \$3.50—10% Discount on 1 Doz. or more
Coaches Introductory Offer 1 (only); complete outfit \$2.50

— P. O. BOX 38, IRVINGTON, N. J. —

MATTHEWS
ABDO-GARD



EVERY KNOCK IS A BOOST!!

CAR-NA-SEAL
TRADE MARK REG. U. S. PAT. OFF.
WEARS LIKE LEATHER

TAKES PLENTY ABUSE!

Whack it, thump it, knock it with a hammer to your heart's content . . . Car-Na-Seal will always come up smiling. You can dent the wood underneath, but unless you punch a hole into the floor you won't mar or break the surface, for Car-Na-Seal is tough as leather . . . and as pliable. Contains 100% bakelite and similar phenolic resins.



IDEAL FOR GYM FLOORS

Ideal for gymnasiums, corridors and other wood floors, for Car-Na-Seal is non-slippery . . . will not scratch or rubber-burn. Keeps the floors more sanitary. As a deep-penetrating seal, it fills the pores and makes the surface impervious to dust and grime . . . actually becomes a part of the floor. Also an excellent finish for desks, as Car-Na-Seal is alkali and acid resisting.

Write Today For FREE Book

Write today for full details and ask for free booklet, "What To Do About Your Floors." No obligation attached.

CONTINENTAL CAR-NA-VAR Corp.

1553 E. National Ave. Brazil, Indiana

World's Largest Makers of Heavy Duty Floor Treatments



the southern and state tournaments before getting around to generate the power it actually had. The Northern League provided a good enough race, but it was for second place. During the regular season nobody could touch Cathedral's veterans, who went through undefeated. In a post season game, Bill Hammond's Cathedral boys took over the Southern League winners.

Northern teams, on the whole, were below par this past winter, with the exception of Cathedral, and Burlington in late-season. The zone defense was used only occasionally among the larger schools, and scoring continued to mount as teams became more familiar with the speed-up rules. Many coaches were heard to comment upon possible undesirable effects on players participating in the streamlined game. Burlington solved the problem by using two complete units. Not many schools could do that in this state, but Buck Hard's first experiment along that line turned out very successfully.

The tournament season began the last week in February, and saw Coach Kier's Wallingford High School team win the Class C championship at Waterbury by defeating Chelsea. The same week, the southern tournament at Rutland produced, as usual, a Proctor High School championship, this year with Bob White at the helm. A week later, Randolph High, coached by Bill Gaidys, won the B tournament at Montpelier by beating the local St. Michaels High School boys, led by Ray Chisholm. This was a low-scoring, defensive battle. Coach Chisholm was nosed out of the championship ship by a single point for the second successive year.

The finals

The climax of the schoolboy season came March 9 at Burlington, when for the second successive year the Little Indians of Cathedral High scalped the fighting underdogs of Burlington High. It was a grand ball game, 42-37, but something of an anti-climax to the better, even closer, semi-final tilt in which Cathedral outlasted Curly Williams' fast-breaking Catamounts of Bennington High, 36-35, in an overtime period. Both teams had several chances to sink a foul shot during the overtime, but it was Cathedral's number six man who finally turned the trick, 20 seconds from the end.

Cathedral placed three men on the all-state team: Bob Lynch, forward; Jim Riley, guard (both six-footers); and Captain Bob Merola, chosen for the third successive year. Captain Jerry Levin of Bennington, the outstanding man in the tournament, and Captain Bob Twitchell of Burlington, also six-footers, were the other all-state men.

Incidentally, Merola was tournament high-scorer in both '38 and '39.

ORSON W. "ORRIE" JAY,
Vermont H. S. Coaches Assn.,
Burlington, Vt.

Ohio

First-time victors

TWO schools that had never before won state honors crashed into the select circle this year. New Philadelphia, averaging 34 points per contest to their opponents' 28, annexed the Class A championship; and New Carlisle, a more potent point maker, with an average of 43 points per game to the enemy's 29, won the laurels in Class B.

The A victors employed a shifting zone defense and a slow break offense and the B champions a combination man-to-man and zone and a fast break attack. New Philly showed its championship caliber in every game. Relying on accurate passing and methodical floor play, the proteges of Paul Hoerneman, one of the state's youngest coaches (23 years of age, to be exact), bowled over four of the toughest teams in the state.

New Carlisle had it much easier than its bigger brother. The B champions' toughest game was in the quarter-finals in which they won a nip-and-tuck battle over Wilshire, 36-32. The two championship games drew 9,084 spectators, bringing the total three-day figures to 35,000, almost 5,000 more than the record set in 1938.

In the Class A finals, the scourge of all tournament hopefuls, the zone defense, proved too much of a stumbling block for Canton. Both teams entered the fray with unsullied records, and for one quarter the game was all it was supposed to be, winding up 8-8. After that, however, it was all New Philadelphia. Castignola, guard, and Barker, forward, carried the brunt of the champions' attack, the former garnering a dozen of his team's 30 points and Barker coming through with seven.

New Carlisle, winners of 29 of 30 games, got away to a 6-0 lead against Canfield in the B final and never relinquished it, triumphing 43-26. One of the most noticeable things in the tournament was the use of the zone defense. Of the 32 teams participating in both classes, almost half employed the zone type of defense.

EARL HICKMAN,
Columbus, O.

Missouri

Small town team wins

VETERAN tournament fans hailed this year's Class B finals as the best in 24 years of the meet's history. Zalma High School of Bollinger County emerged as champion with Bland of Gasconade County a very strong runnerup.

Zalma, a hamlet of 204 people, had a team which specialized in strong driving finishes. It was a well-balanced outfit that relied on a quick breaking offense throughout the tournament. When slowed down, the boys resorted to short, lightning-like thrusts out of a beautiful short pass-

ing game deep in the frontcourt. Dale Cato, a pint-sized forward, and Troy Lingle, the team's high scorer, sparked Coach James Thornton's attack and delivered a state championship to him in his first year of coaching.

The Bland attack was based on a widely divergent school of basketball. They used a slow breaking, deliberate offense with set called plays. Against tight defenses, these plays did not work so well and most of their baskets were scored off options. Outstanding for Coach Oral Spurgeon's team were Lyle Fisher, guard, and Weldon Steiner, forward. All four semi-finalists used the man-to-man defense.

McBride High School of St. Louis, winner of the city's Prep League, crashed through to its first state Class A title with a victory over Springfield Senior High in the final game.

C. E. POTTER,
High School Coaches Assn.,
St. James, Mo.

Texas

North of the border

AFTER battling their way through county eliminations and district and regional tournaments, eight basketball teams hooked up in the final two-day tourney for the state title. San Marcos won the crown by beating Austin of El Paso, 22-21, in a thrill-soaked game that saw the losers storm up from a seven-point deficit in the last two minutes.

Neither of the finalists were as tall as the finalists last year, but both teams were much faster. All of the tourney teams, with the exception of Crowell, used a man-to-man defense. San Marcos, a team of exceptional ball-handlers, employed a pivot attack that was built around a great center.

After this track season, the state's secondary schools will abolish the javelin throw, lower the high hurdles three inches, shorten the low hurdle race to 200 yards, and adopt the lighter discus. Lone Star schoolboys have been using the collegiate discus, 42-inch hurdles and the 220 yards distance in the low hurdles. In 1941, the track schedule will closely resemble the model high school program set up by the National Federation.

More than 500 schools will compete in football during the 1940 season, including AA, A, B, and schools playing the six-man game.

J. GOOPER KEYES,
H. S. Football Coaches Assn.,
Lubbock, Tex.

Iowa

Girls' tourney

FIVE records went overboard as Hansell High captured the state girls' basketball tournament by overwhelming Waterville High in the final, 59 to 20, the largest margin ever established in a final contest. Helen

(Continued on page 52)

QUINSANA POWDER

SETS NEW RECORDS IN TREATING

ATHLETE'S FOOT

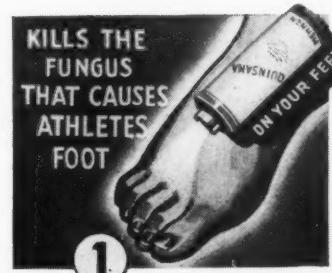
FROM all parts of the country reports pour in indicating that a new day is here in the treatment of Athlete's Foot (fungus infection of the feet). Dermatologists, clinics, chiropodists . . . all report outstanding results with Quinsana. At a large eastern university, incidence of Athlete's Foot in test groups was reduced from over 80% to practically nothing—with Quinsana treatment. In a southern city, it was reduced from over 90% in test groups to almost zero—with Quinsana treatment.

BASED ON MODERN pH THEORY

Quinsana is a potent, non-irritating fungicidal powder. Its action is simple, direct—based on the modern pH theory. It creates an alkaline medium in which the Athlete's Foot fungus cannot live.

EFFECTIVE 2-WAY ACTION

Quinsana acts in two ways! (1) Used on the feet, it helps kill the fungus. (2) Used in the shoes, it helps prevent re-infection from shoe linings, where the fungus usually thrives.



1



2

THE MENNEN COMPANY, Newark, N. J.

QUINSANA IS A MENNEN PRODUCT

SPORTS

As Taught and
Played At

West Point

Famous Coaches
Tell How To Excel At 17 Sports
PRICE \$2.00
557 Illustrations 352 Pages
The Military Service Publishing Co.
Harrisburg, Penna.



When Split Seconds Count! Minerva STOP WATCH

offers unmatched SERVICE through Patented COIL-SPRING.

- The only Stop Watch equipped with coil-spring mechanism.
- Guaranteed against breakage, wear, flaws, poor-timing.
- For Sportsmen—NURMI, the master athlete, and other famous athletes known the world over, use MINERVA Time Recorders, thanks to which their training is successful.
- For all SPORT uses—Write for FREE Catalog.

M. DUCOMMUN CO
580 FIFTH AVENUE
NEW YORK



For catalogues, coaching literature and general information on the products of Scholastic Coach advertisers, refer to the master coupon on pages 55 and 56.



Genuine HODGMAN SIDELINE PARKAS

NO. 149 "COLLEGIATE"

Made of extra strong rubberized percale doubled to heavy blanket lining material. Double stitched seams. Raglan shoulders, fully cut to allow room for pads. Approximately knee length with full skirt so that garment will go under the seat and over knees when player is seated. Nickled, rustproof buckles in front. Extra large slash pockets placed high to make easily accessible when seated on bench. Furnished on special order in extra lengths or with zipper hood at an extra charge.

COLORS: Royal Blue, Navy Blue, Cardinal, Green, Khaki, Gold, or Scarlet. SIZES: Small, Medium, Large. LENGTH: 38½ inches.

NO. 130 "SCHOLASTIC"

Same material, construction, and colors as the No. 149, but 34½ in length. Available in this length only. Rustproof snap front. Zipper hood furnished at extra charge.

COLORS: Royal Blue, Navy, Cardinal, Green, Khaki, Gold, or Scarlet. SIZES: Small, Medium, Large. LENGTH: 24½ inches.

Numbering or Lettering on Special Order at Nominal Charge.

WHAT THEY SAY:



"MATTY" BELL,
Coach of South-
ern Methodist,
says: "The Hod-
gman Sideline Parka
impresses me as be-
ing the warmest and
most durable parka
that can be used for
football squads."



LLOYD JORDAN.
Coach at Am-
herst, says: "I say
Hodgman Parkas
are practical. There
is plenty of comfort
and roominess in
their full cut."

*See it at your dealer's. If he
can't supply you, write us.
Sample swatches on request.*

HODGMAN RUBBER CO.

Dept. S

FRAMINGHAM, MASS.

Scholarship Among Athletes

By Benjamin Hays Culley

The day having passed when athletes made their initial appearance of the week at school on Friday afternoons just in time to dress for the game, those in charge of interscholastic athletics in the well-balanced schools have been giving considerable time and thought to methods of improving scholarship among athletes, where such improvement is needed. According to the study made by Benjamin Hays Culley at Eagle Rock High School in Los Angeles, our modern athletes are now "right up there" when it comes to batting out honors in other phases of school life besides athletics. The author, a graduate (Phi Beta Kappa) of the University of Southern California, has been teaching and coaching in the Los Angeles city system since 1936.

EVER since the interscholastic athletic program attained its present stature, there has been unusual interest manifested in the scholarship of the participating group. There are many school men who honestly believe it is impossible for a boy to engage in athletics and still do justice by his studies. Of course this opinion is not shared by the vast majority of administrators. But, with the exception of a few related studies, there has been little statistical evidence to support either side.

It was with this thought in mind that the present study was undertaken at the close of the 1938-39 school year. This year was considered a typical school year and the Eagle Rock student body a typical student group. Eagle Rock is one of the 30 cooperative schools under the Commission of the Relation between the Secondary Schools and the Colleges, headed by Wilfred Aiken of the Progressive Education Association. As such it has been granted certain freedom in the preparation of its curriculum, which differs in many respects from the traditional "three R's." This fact may have a bearing upon the statistical findings, but the author is disinclined to place much weight on it.

For the purposes of the study, the boys of the school were divided into three classifications: (1) lettermen, those boys who actually won either a varsity, Class B or Class C letter in some sport during the school year; (2) athletes, those boys who participated in the sport full time, but did not compete in enough league games to win a letter; and (3) general students, those who did not participate in any interscholastic sport.

In order to close the year's records, we eliminated from consid-

eration those students who either graduated or entered in February. Although this move shut out approximately 75 boys from the study, it had little affect on the ultimate results since the boys would have been proportionately distributed over the three divisions. The entire survey took in 92 lettermen, 112 athletes and 310 general students, making a total of 514 boys.

Before considering the statistical facts, the reader should remember that the grading system of Los Angeles schools differs somewhat from other school systems. The student is marked on five items: subject achievement, responsibility, inquiring mind, social concern, and work habits. Each item is marked with an "R", "S" or "E".

These grades indicate the following, respectively: outstanding (recommended for college entrance); satisfactory; need to improve (no credit toward graduation). To arrive at a statistical computation of these grades, it was necessary to assign an arbitrary numerical value to each of the letters. Thus, an R was given two points, an S one point and an E no points. Since each student received an average of five different marks, it was possible to earn a score of ten points as a maximum and zero points as a minimum. All of the averages herein-after presented are computed on this basis.

INTELLIGENCE. The three groups have practically the same I.Q. scores, with the lettermen having an average of 107.55 to 107.51 for the athletes and 107.40 for the general students. This slight range, 0.15 between the highest and lowest groups, is not enough to prove that the variations which appear in the other marks are due to the fact that the athletes and lettermen have more native intelligence to start with. The mean is slightly higher than in many schools, perhaps, because of the fact that Eagle Rock is a purely residential district for the so called "white collar" worker.

ACHIEVEMENT. The mean scores are 7.0696 for lettermen, 6.7584 for athletes and 6.6210 for the general students. If 100 percent is used to designate the score of the general students, the lettermen then show a score of 106.8 percent, the athletes 102.1 percent and the two combined 104.5 percent.

RESPONSIBILITY. While all scores take a drop, the order remains the same with scores of 6.8038, 6.7075 and 6.6194, respectively, for the three groups. The percentages, computed on the same basis as before, are also lower. The lettermen present a percentage of 102.8, the athletes 101.3 and the two combined 102.1.

INQUIRING MIND. The most significant differences in the entire study appear here with the lettermen scoring 6.8641 as against 6.1295 for athletes and 6.0726 for the general students. In terms of percentage, using the score of the general students as an index (100 percent), the lettermen score 111.4 percent, the athletes 100.9 percent and the two combined 106.2 percent.

SOCIAL CONCERN. The lowest scores of the entire study were recorded under this heading but the order of finish still remained the same: 6.5000 for lettermen, 6.1384 for the athletes and 6.0016 for general students. In percentage terms, these figures come to 108.3, 102.3 and 100.0. The combined lettermen-athletes rating is 105.3 percent.

WORK HABITS. Here again the general drift was not interrupted. The scores recorded were 6.8968, 6.4375 and 6.3661 for lettermen, athletes and general students, respectively. The lettermen showed a rating of 108.3 percent, the athletes 101.1 and the two combined 104.7.

In addition to these pure mean scores, three correlations were computed between several of the items to discover whether there actually was any significant correspondence. It was found that the correlation between intelligence and achievement ranged from .34 to .39 for the three groups. This merely bore out what the previous statistics on these traits already proved: that there is no significant relationship between the native ability of any given student and his scholastic achievement.

A rather high correlation between work habits and achievement was more or less expected, and the scores of .78 and .77 were merely corroborative evidence. The other correlation, between social concern and responsibility, showed a rating of from .64 to .71, which is more or less significant but beyond the scope of this study to interpret.

Additional statistics were compiled on the various sports themselves. It might be of passing interest to note that among the six major sports, the boys playing tennis ranked highest in all of the items listed with an average of 118.4 per-

(Concluded on page 45)



Get the most out of their ABILITY

You'll carefully check your players for good eyes, good arms and good coordination, but in order to get the most out of the natural ability that they have, you must provide them with the best equipment possible. If you buy them bats they have confidence in you can help your team to victories. Louisville Slugger Bats have helped baseball's greatest sluggers to championships — your boys know that, and that's why they'll have more confidence in their own ability when they're facing the pitcher. Write for the

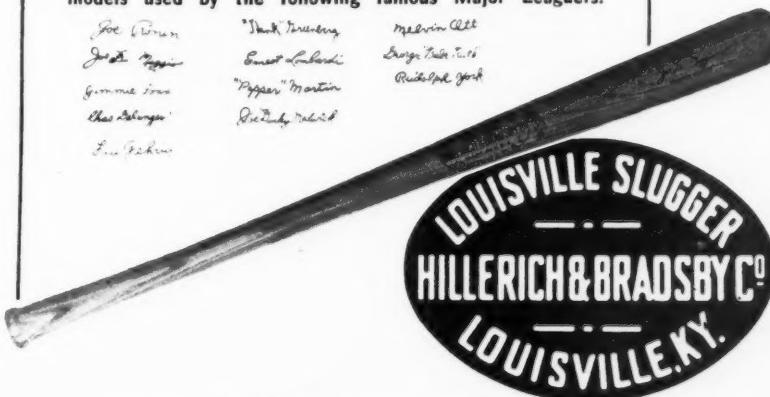
Louisville Slugger 1940 Catalogue and price list of both Louisville Slugger Baseball Bats and Louisville Slugger Softball Bats.

FREE: "Famous Sluggers of 1939" and enough softball rule books for your needs will be sent on request. Please address Dept. SC.

HILLERICH & BRADSBY CO., INC.
LOUISVILLE, KY.

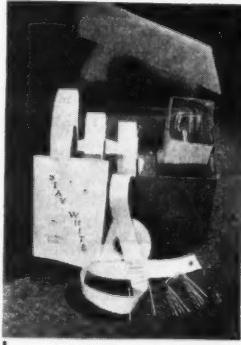
Famous Autographed Louisville Sluggers designed especially for prep school and college hitters are available in the models used by the following famous Major Leaguers.

Joe DiMaggio	"Shank" Tarsney	Malvin Clift
Jackie Robinson	Ernest Lombardi	George Tsitsikitis
Gunner Law	"Piper" Martin	Ruelton York
Chas. Gehringer	Deacon McGuire	
Edd Roush		



GOOD QUALITY BUILDS CONFIDENCE

*Genuine Autographed
LOUISVILLE SLUGGER BATS*



Write now for
FREE SAMPLE
and descriptive folder.

Your Courts Marked With Clean-Clear
(rubberized)

STAY WHITE

Means You're Always Ready for Play

WITH this new, waterproof tennis tape, you can use the court right after a rain. The lines are cleaner and whiter then. They're safe because they stretch taut, lie flat, do not rot and break. Endorsed by Bill Brown, N. Y. State Boxing Commissioner, owner of famous physical training farm.

Also STAY WHITE tennis net top binding for protection, long life, clearer visibility.

Raymond B. Healy, 133 Davis Ave., White Plains, N. Y.



If you have something for this column send it to Bill Wood, Evanston Township High School, Evanston, Illinois.

There's been fowl business afoot on the hardwoods this winter according to Associated Press dispatches. It happened first in a hot game between Westminster and Tarkio colleges at Fulton, Mo. As the half ended, timer Burton Moore pointed his gun toward the roof and pulled the trigger. As he ejected the blank cartridge, down from the rafters floated a dead guinea hen. After that the crowd didn't care who won.

At Stanford the situation was even more tense. "The auditorium was a madhouse as the hands of the clock swung into the closing seconds of play. The timer raised his gun, paused momentarily, and fired." This time it was a mallard duck.

Stan Modzelewski, sharpshooting sophomore center at Rhode Island State, must have been red hot all winter. In 21 games he ran up 495 points for a new national scoring record. The old record of 477 points was set last season by Chet Jaworski of the same school. Both players are graduates of Worcester Classical High School. Modzelewski and his Rhode Island red fire-wagon associates, it might be added, struck one ten-game streak this year during which they averaged 75 points a game. All of the boys enjoyed it except the scorekeeper—and the victims.

Washburne High of Chicago could have used a few extra points in their game with Wells High. In the first few seconds Bernas, a Washburne forward, began the scoring with a free throw. Final score: Wells, 43; Washburne, 1.

Can anyone give us the details on that Franconia, Vt., outfit that downed Haverhill, 111-43 one night

and trimmed Ashland, 111-44 the next? The defense was a little weaker the second night. The boys were tired. And then there is the girls' team from Rochester, N. Y., equally consistent. On a Wednesday the Filarets won 99-16. The following Sunday they were victors by a 100-16 score. Thanks to Eddie Brietz for these.

Consistent, also, is Donald Lackie, leading scorer on the Ontonagon, Mich., team coached by Robert Northey. For the fourth straight year Lackie has been named on the all-tournament team of the Copper Country.

For seven consecutive years the Panthers of Ashland, Ill., swept through all opposition in their own invitational tourney, but this season Riverton downed them 22-17. From 1923-1937 the fans attending the Winchester, Ill., annual cage fest found J. A. Leitz's Murrayville "Shadows" in the final rounds 13 times. The Murrayville team, traditionally a race-horse outfit, almost always appeared in black suits.

Among the champions we present Coach R. L. Flake, Lavaca, Ark. During the last three years his basketeers have won 100 out of 109 games, including eleven tournaments — seven invitational, three county and one district. In 1937-38 the victory count was 36 out of 39; in 1938-1939 it was 36 out of 40; this season it was 28 out of 30. There is some talk in Lavaca, population 350, of putting up a special building just for the trophies. The present gym—well, Lavaca doesn't have one. All of the games have been played away from home.

Considering the caliber of the opposition year after year, one of the most remarkable high school coaching records in America is that of Eddie Chambers, whose Crystal Falls, Mich.,

cagers have just turned in their third consecutive Upper Peninsula Class C championship. In the victory parade are 39 wins against 1 loss. A 34-game winning streak was broken this winter by Iron River.

Chambers, who, as captain and all-western guard at Michigan in 1927, won fame as a "money player," seldom has his players on the practice floor longer than one hour. The remainder of the daily session is spent on a thorough-going analysis and study of various offensive and defensive maneuvers.

Perhaps we oughtn't to mention it, even by way of contrast, but does Marshfield, Wis., still have possession of the losers' mug? The last we heard about it, they were resting on the bottom with 63 setbacks in a row. The previous low was held by Washington, Iowa, with 40-odd.

We pause in our basketball review for a football yarn from Coach Yates Breeding, Loudon, Tenn. "In our game with Sevierville last fall, Blair, our fullback, scored from the twelve-yard line. On the next kick-off Robinson of Sevierville ran the ball back for a touchdown. Then Sevierville kicked-off and Schulien of Loudon took his turn at carrying the pigskin into pay territory. So far as I know this is the first time two touchdowns have been scored on runbacks of two successive kick-offs."

Incidentally, for the first time in the history of the school, Loudon was undefeated and untied last fall.

While we are on the subject of football, let's hear from Principal W. A. Sloan, Jr., Blooming Grove, Tex. "I can stand it no longer! For the last few months you keep quoting the weights of football players and I have wondered why the officials of Ennis, Tex., High School have not written you of one Allison Boren, No. 77 on

their team, who scales an even 340 pounds. Please investigate this and let that be a standard for the rest of the fellows to shoot at."

We had just oiled our typewriter for that very purpose when along came a letter in red ink on blue paper from Maurice "Dutch" Baumgarten, director of athletics at Nacogdoches, Tex., and we just gave up. A classic follows. "Have been reading about the big boys these coaches have been talking about. Those boys are just kids. I have a *real* boy on my squad. Here he is.

"Clarence Gartman: 15 years old, 6 ft. 4 in. tall, shoes 13, waist 53, thigh 34½, calf 22, chest 47. Rather active for a big boy. We are going to use him at right tackle on offense and as an apex to the five-man line on defense. He has only missed one day of school in the past four years. That was the day he transferred from a rural school to ours. We have special seats for him in each of his class rooms when he changes from one period to another. He has three more years of eligibility in our state, 18 is the age limit. He is now in the eighth grade. We use a tent and awning company to make his uniform. His weight is 367 pounds. This is correct because I weighed him."

At Baldwin, Kan., Coach Joe Wallace has a 6 ft. 2 in., 155-pound track man who wears a size 14 shoe. The smallest boy on Wallace's squad is exactly ten inches shorter and wears shoes exactly ten sizes smaller.

In reading 'Coaches' Corner' I am reminded of the fact that high school players aren't the only ones who pull boners. In a game with Whittier College this season I warned the boys to let the captain do all the talking to the officials. Later I sent a substitute into the game who failed to report, drawing a technical foul. When I reminded him of the omission after the game, he said, 'Well, Coach, you told us not to talk to the officials.'

"We lay claim to the world's smallest mature mascot. Noble Roseboom, varsity mascot, is a freshman who, at twenty years of age, is just 3 ft. 6 in. tall and weighs only 65 pounds."

For the above, thanks are due Ralph W. Welch, director of athletics at Chapman College, Hollywood.

Add stories-behind-team-names department: Euclid Cobb for more than twenty years has directed the activities of the athletic teams representing Rapid City, S. D. You guessed it; they are known as the "Cobblers."

Add gymless-wonders department: The girls' basketball team of Monetta, S. C., since they have no building available, do all of their practicing outdoors. Their winning streak of 154 games piled up during the last eight years suggests that the handicap hasn't functioned very effectively.

BILL WOOD

June 24th to 29th, at Canton, N. Y.

ST. LAWRENCE UNIVERSITY COACHING SCHOOL

under

• **CARL G. SNAVELY**

Head Football Coach, Cornell University's Championship Team

and

• **FRANK J. KAVANAGH**

Trainer of Cornell's Athletic Teams; Former U. S. Olympics Trainer
assisted by

George E. James, Assistant Football Coach, Cornell Univ.
Ronald T. Burkman, Basketball Coach, St. Lawrence Univ.

Presenting an intensive 6 DAY COURSE emphasizing the FIVE-MAN LINE, SHIFTING DEFENSES, SINGLE WING SPINNER OFFENSE, FORWARD PASSES, and other modern trends in football coaching and strategy, and the later developments in training and conditioning as well as care and treatment of injuries. DEMONSTRATIONS — MOTION PICTURES — INDIVIDUAL PROBLEMS—Field demonstrations by two high school teams. A special feature will be lectures by Coach James, using for the first time the most comprehensive set of motion pictures ever assembled to demonstrate the execution of thirty fundamental phases of football under game conditions. Lectures and demonstrations in basketball, by R. T. Burkman, highly successful coach, will feature the most modern techniques.

Enjoy six days crammed full of instruction and recreation in the beautiful foothills of the Adirondacks. Fishing, golf, tennis, and all outdoor recreations. Tuition \$15.00. Board and Room in modern and attractive men's residence, \$2.50 per day.

For full information write

ROY B. CLOGSTON, Director, BREWER FIELD HOUSE, CANTON, N. Y.

EVERWEAR Basket Ball Backstops

EVERWEAR Playground Apparatus

ECONOMY Playground Apparatus

**EVERWEAR Swimming Pool
Equipment**

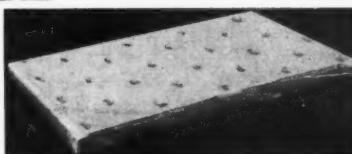
Write for FREE Catalog No. 32—Address Dept. S

EverWear
MANUFACTURING COMPANY
SPRINGFIELD OHIO

If you would like an extra copy of Scholastic Coach a year's subscription will cost you only \$1.50. Send your order to SCHOLASTIC COACH, 250 E. 43 St., New York, N. Y.



GYM MATS



For tumbling, boxing, wrestling, and as buffers around basketball courts.

SEND FOR NEW BOOKLET
PETERSEN & COMPANY
5561 BAYNTON STREET PHILA., PA.

PYRA-SEAL for GYM FLOORS



Every coach expects slip-ups on plays. But slips on floors are needless--especially when there is PYRA-SEAL treatment available to provide sure-footed speed with safety. This better floor seal makes possible more minutes of active play -- more opportunities to score.

Why Gym Floors Need PYRA-SEAL Protection

PYRA-SEAL makes gymnasium floors look better and wear longer. It seals the pores of the wood, and ties the surface fibers into an integral whole--dries to a smooth, hard, lustrous yet non-slip finish that does not chip, crack or peel. Resists acids, alkalis, alcohol, ink, hot or cold water. The most practical and economical seal for gymnasium floors. Write for catalog today!

Approved and recommended by the Maple Flooring Mfrs. Assn., National Oak Flooring Mfrs. Assn., and specified by leading architects.

Get This Book FREE

Our Free Record Book "How To Make Stars" contains helpful charts for easy record keeping of players' faults as they occur. Free on request to any coach.



VESTAL CHEMICAL LABORATORIES, INC.
ST. LOUIS
NEW YORK

Passing the Baton

(Continued from page 15)

other runners to get used to starting under actual meet conditions.

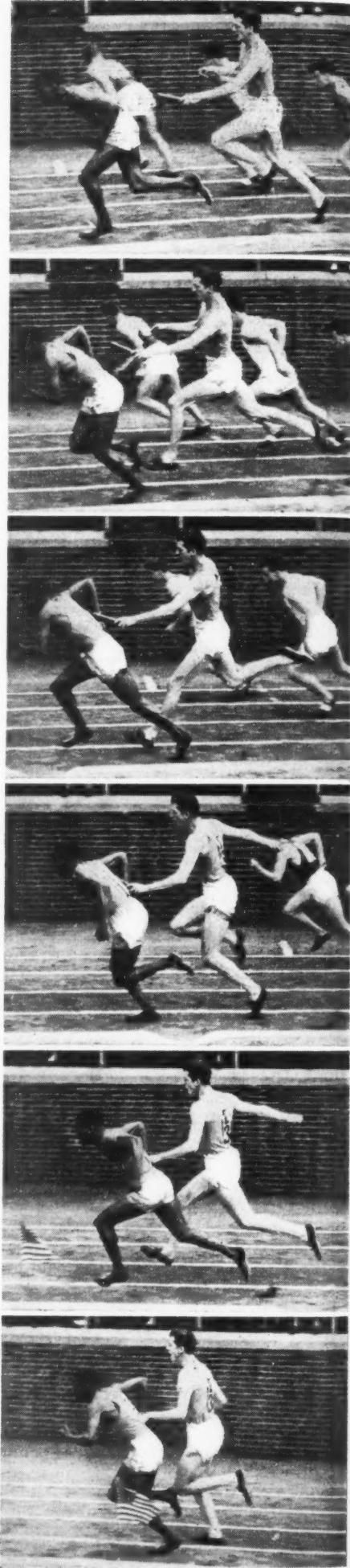
The placing of the runners will vary according to your personnel, the opponents' lineup, the conditions of the track, the weather, or meet conditions. With stagger starts and lanes, it does not make a great deal of difference. If the track is not staggered, however, it may be wise to use your fastest man first, provided he is the best starter.

In this case, the second man can move five yards deeper into the passing zone and thus take the pass in front of and away from the other runners. Otherwise a strong boy who can hold his feet in a jam should be assigned to the number 1 spot. As a rule, I use my second fastest boy on the second leg of the race for that early lead generally wins the race.

Naturally, most coaches have their own idea on the subject. In the most commonly accepted arrangement, the fastest man is placed in the anchor position--the fourth leg of the race. This arrangement presupposes that he can either retain any lead given him or to retrieve any loss he may have inherited. The second fastest man is assigned the leadoff position in the hope that he will run on even terms with the field or possibly hand over a lead to his teammate. The slowest man is put in the number 2 spot so that if he should suffer a loss of distance, there remain two good men to make it up.

Weather conditions may play an important role in the placing of men. Once in a high wind we switched our regular order so that the two strongest boys ran against the wind, while the lighter, but faster boys had the wind at their backs.

During the season I try to make the squad relay-conscious by dividing the entire squad, weight men and all, into four teams and pitting them against each other in a relay race once a week.



In this sequence, the third and fourth men of Columbia University's crack 1938 sprint quartet give a splendid demonstration of the non-visual sprint pass described on page 14. To receive this pass the anchor man, Ben Johnson, places the fingertips of his right hand on his hip so that the hand is in a cupped position with the thumb pointing forward. The passer, running at top speed, surrenders the baton with a full extension of the passing arm.

Scholarship

(Continued from page 41)

cent. Basketball players ranked second with 111.6 percent; then, in order, gymnastics, football, track, and softball. It is interesting to note that the latter sport rated only 98.9 percent. It seems logical to deduce that the boy who is slightly below average is attracted to this game, and should be encouraged to use it as a physical outlet. These facts are merely amplifications of the study and have little bearing upon the final conclusions.

General conclusions

It is true that a clever statistician can manipulate figures to make them prove almost anything. But in this instance the author entered the study with no predetermined conclusions to "prove." The approach was made with an open mind. However, since the study proved what it did it is hoped that the actual statistical information will help further the cause of athletics wherever such assistance is needed. The conclusions follow:

1. Boys participating in athletics are comparable to the general students in native intelligence, that is, insofar as the modern I.Q. tests are concerned. The difference is so slight that it may be safe to assume they have essentially the same mental equipment.

2. The fact that the grades of the athletes averaged five percent above the rest of the students proves that participation in athletics is no drawback scholastically; and that sports may actually serve as a stimulant to many who otherwise would neglect their studies. The average scholastic eligibility requirements alone constitute a sharp-edged spur for the athlete.

3. A range of two to six percent in favor of the athletically inclined boy in all four of the standards upon which he is graded, bears out the same general conclusions.

4. The facts support the claim of school men who have argued that the interscholastic program had benefits which were inherent in the program itself and which were not necessarily confined to physical improvement.

5. Since boys participating in softball show an I.Q. average score almost ten percent below the general student level and an achievement score only one-half of one percent below there is justification for the inclusion of this sport.



For SCHOOL TOWEL Value!

Schools the nation over prefer McArthur towels—for service, satisfaction, and economy. Super-Turk and Super-Gym, favorites of the nation's athletes.

See McARTHUR exhibit--National Meeting P.E.A., Chi., Ap. 24-27

McArthur robes are designed to economically give you perfect styling, long life, and free action. Robe-A-Rub—double duty robe and towel; Velva-Terry—extra absorbent in a choice of colors, favorite of swim teams and clubs.

Write For McARTHUR Free School Towel Plan

Western Representative: E. P. FINIGAN CO., 314—12 Street, San Francisco

GEO. McARTHUR & SONS
BARABOO, WISCONSIN

LIGHTING THE
BIG LEAGUES

Lighting the Polo Grounds, Shibe Park, Comiskey Park, Sportsman's Park, Forbes Field and other big league baseball fields presents no different problem to Westinghouse lighting engineers than that of lighting college, high school or community sports fields. All athletic fields require seeable, playable light. They must enable the player to perform at daytime efficiency . . . and they must bring in spectators . . . enable them to follow every play. That's why so many big league owners have turned to Westinghouse for playing field lighting . . . why so many schools have specified Westinghouse. Consult the nearest Westinghouse Sales Office for a comprehensive layout. Or write Westinghouse Electric & Manufacturing Company, Lighting Division, Edgewater Park, Cleveland, Ohio.

Westinghouse Lighting Equipment



**UTAH STATE'S FOURTEENTH
ANNUAL COACHING SCHOOL**

JUNE 10-14 LOGAN, UTAH

*"The West's Leading Summer
School for Coaches"*

FOOTBALL

CARL SNAVELY, Cornell University
Coach of Undefeated, Untied Cornell's
Big Red Team

BASKETBALL

HOWARD HOBSON, Oregon University
Coach of Oregon U.'s National
Champions 1939

TUITION \$10

Study under America's top coaches in the
heart of the Rockies—spend your leisure
hours in the cool breezes of picturesque
Logan Canyon where fishing is unsur-
passed.

E. L. Dick Romney, Director

Utah State Agricultural College
LOGAN, UTAH

**FIRST ANNUAL
RUSHMORE
COACHING SCHOOL**

June 3-8—Tuition \$15

FOOTBALL

Frank Leahy—Head Coach Boston College

BASKETBALL

Dave McMillan—Head Coach U. of Minnesota

TRAINING

H. B. GoodeLL—Dir. of Ath. S. Dak. Mines

SIX-MAN FOOTBALL ROUND-TABLE

H. A. Sullivan—Coach, S. Dak. Mines

Leahy and McMillan are two of the outstanding coaches in their respective fields. More than this, they are two coaches that can put across their ideas from the lecture platform. People travel from both Coasts just to see the beautiful Black Hills, the Switzerland of America. Such scenic wonders as Mt. Rushmore Memorial, Dinosaur Park, Geological Museum, Historical Deadwood, Homestake Gold Mine, Bad Lands, Custer Stockade, with Trout Fishing, Golfing or what have you. Play while you learn in the Real Land of Vacations.

For further particulars write

H. B. GOODELL or H. A. SULLIVAN

Directors

**South Dakota State School of
Mines**

Rapid City, South Dakota

40-Point Game

OUT of the West—the birthplace of streamlined basketball—comes another refinement of Dr. Naismith's original peach - basket game—the 40-point contest. Several of the basketball cognoscenti on the Coast are toying with the idea of eliminating the time element in regular contests and awarding the victory palm to the team that scores 40 points first. Under this plan the half would end automatically when one team reaches 20 points.

Coach Pete Miller of Pacific University (Forest Grove, Ore.) experimented with this new idea in a double-header against two independent teams of Portland.

As fate would have it the experiment was a complete success. It tested the new game under two distinct conditions: (1) When one team is far superior to the other, and (2) When the two teams are evenly matched. In the first game of the twin bill, Pacific trounced the Bank of California quintet 40-18. The college boys were never in danger, and had the game gone the full 40 minutes the score would have been even more one-sided. As it was, under the 40-point idea, some 13 minutes were cut off the regulation playing time, much to the delight of the spectators (and the bankers).

The second game was a nip-and-tuck affair with the Badgers eking out a 41-36 victory over Meier & Frank Co. The game was so close that the spectators forgot all about the time element. They were probably unaware of the fact that the game was actually several minutes shorter than usual. When both teams approached the 40-point desideratum, they really opened up with everything they had, probably figuring that a good offense in this particular situation was the best defense.

Coach Miller explained, "If it does nothing else, the 40-point game is particularly advantageous in that it absolutely eliminates any semblance of stalling, even when a team is ahead near the finish. Obviously with only a few points to go, the thing to do is to go out and make 'em at once." Another interesting feature of the game, according to Miller, is that "It kept the players on their toes and made them play better basketball. When a team is playing against time, there is always the danger of a last-minute tendency to go wild. With the time element removed, the players can always keep a cool head and play a superior brand of ball."

The players on the independent teams also endorsed the new game.

IT'S AT

NORTHWESTERN

THIS SUMMER

August 19-31

Two Weeks of Intensive Study

FOOTBALL

EDDIE ANDERSON, Iowa
1939 Coach of the Year

LYNN WALDORF, Northwestern

Also Burt Ingwersen (Line)
Wes Fry (Backs)

BASKETBALL

WARD LAMBERT, Purdue
1940 Big Ten Champions

DUTCH LONBORG, Northwestern

Also

Track, Tennis, Administration,
Training, Intramurals, Scouting

WATCH THE ALL-STARS

Sixty All-Americans of 1939 will practice daily for game, Aug. 29, with Green Bay Packers. Unequalled opportunity to watch nation's leading coaches prepare team for a game.

For Further Information Write

K. L. WILSON, Athletic Dir.

Northwestern University
Evanston, Ill.

**COLORADO
COACHING SCHOOL**

In The Cool Rockies

AUGUST 19TH TO 24TH

SPONSORED BY THE

**COLORADO HIGH SCHOOL
COACHES' ASSOCIATION**
AT THE UNIVERSITY OF
DENVER, DENVER, COLO.

SPORTS

FOOTBALL	BASKETBALL
TRACK	TRAINING
GOLF	MOVING PICTURES
ENTERTAINMENT	

LECTURERS

JOHN "OX" DaGROSA
C. W. "CAC" HUBBARD
HARRY W. HUGHES
E. L. "DICK" ROMNEY
H. E. REED
JOE ERPS
DR. FOSTER MATCHETT
HAROLD LONG
and others.

Climate and Facilities Unexcelled

TUITION \$10.00

For Further Information Write
L. H. Mahony, University of Denver
Denver, Colorado

Coaching School Directory

BUTLER UNIVERSITY—Indianapolis, Ind. Aug. 5-10. Paul Hinkle, director.

COLORADO H. S. COACHES' ASSN.—Denver, Colo. Aug. 19-24. L. H. Mahony, director. Staff: "Ox" DaGrosa, "Cac" Hubbard, Harry Hughes, Dick Romney, Dr. Foster Matchett, Harold Long. For further details see advertisement on opposite page.

DAVIS MOUNTAIN—Fort Davis, Tex. July 28-Aug. 3. John G. Prude, director.

DAYTONA BEACH—Daytona Beach, Fla. Aug. 19-24. G. R. Trogdon, director.

DUKE UNIVERSITY—Durham, N. C. July 29-Aug. 3. Wallace Wade, director.

INDIANA BASKETBALL SCHOOL—Logansport, Ind. Aug. 19-23. Cliff Wells, director.

IOWA UNIVERSITY—Iowa City, Ia. June 10-Aug. 2. E. G. Schroeder, director.

KANSAS COACHING SCHOOL—Topeka, Kan. Aug. 19-24. E. A. Thomas, director.

KENTUCKY UNIVERSITY—Lexington, Ky. Aug. 12-17. M. E. Potter, director.

N. Y. HERALD-TRIBUNE—New York, N. Y. Aug. 26-30. Stanley Woodward, director.

NORTH CAROLINA—Chapel Hill, N. C. Aug. 19-31. R. A. Fetzer, director.

NORTHWESTERN UNIVERSITY—Evanston, Ill. Aug. 19-31. K. L. Wilson, director. Football: Eddie Anderson, Lynn Waldorf, Burt Ingwersen, Wes Fry; Basketball: Ward Lambert, Dutch Lonborg. For further details see advertisement on opposite page.

PENN STATE COLLEGE—State College, Pa. Inter-Session, June 11-28; Main Session, July 1-Aug. 9; Post-Session, Aug. 12-30. P. C. Weaver, director. Health Education, Recreation, Physical Education, Athletics. See advertisement on page 54.

RUSHMORE COACHING SCHOOL—Rapid City, S. D. June 3-8. H. A. Sullivan, director. Football: Frank Leahy; Basketball: Dave McMillan; Training: H. B. Goodell; Six-Man Football: H. A. Sullivan. For further details see advertisement on opposite page.

ST. LAWRENCE UNIVERSITY—Canton, N. Y. June 24-29. Roy B. Clogston, director. Football: Carl Snavely; Training: Frank Kavanagh; Basketball: Ronald T. Burkman. For further details see advertisement on page 43.

TEXAS A. & M. COLLEGE—College Station, Tex. Aug. 18-24. H. H. Norton, director.

TEXAS H. S. FOOTBALL COACHES' ASSN.—Houston, Tex. June 24-29. W. B. Chapman, director.

UTAH STATE AGRIC. COLLEGE—Logan, Utah. June 10-14. E. L. Dick Romney, director. Football: Carl Snavely; Basketball: Howard Hobson. For further details see advertisement on opposite page.

WASHINGTON ST. UNIVERSITY—Pullman, Wash. Two Sessions: June 17-July 12, July 15-26. J. Fred Bohler, director.

WEST VIRGINIA UNIVERSITY—Morgantown, W. Va. Aug. 5-10. Alden W. Thompson, director. Football: Jim Crowley, Dick Harlow, Bill Kern; Basketball: Clair Bee, Dyke Raese.

What the school field has been seeking . . . Goal-Hi offers all the exercise value of regular basketball, yet remains an informal game rather than a high-speed sport . . . A year-round game, played by boys and girls of all ages, indoors and out-of-doors (use the same single piece of equipment in all locations) . . . Goal-Hi may be played by entire gym classes or playground groups . . . Official Rules Book by Dr. Allen . . . Goal-Hi equipment is priced within the reach of every school budget.

Write for Catalog
(Manufactured Under Exclusive License Agreement)
FRED MEDART MANUFACTURING CO.
3540 DeKalb Street * * * * St. Louis, Mo.
Authorized Sales Representative in Your Locality



WINTARK
Molded Composition Covered
BASKETBALLS
are the Only Playground Balls
ENDORSED BY THE NATIONAL FEDERATION
of High School Athletic Associations

The SANCTIONED STAMP Is
ASSURANCE to YOU that you are getting a tested
product with RULE BOOK REACTION when YOU

BUY WINTARK

Send for our new catalogue.

THE WINTARK CO. (NOT INC.), 4606 W. 21ST STREET, CHICAGO, ILL.

**INSTANTLY
SKIN-TIGHT!**

Round-Robin Schedules

(Continued from page 32)

The next step is to list all the combinations that are possible for number 10, in logical order in the first column, as follows:

1-10	2-9	3-8	4-7	5-6
2-10				
3-10				
4-10				
5-10				
6-10				
7-10				
8-10				
9-10				

The column headed by the 2-9 combination should be completed by proceeding downward in order until all the numbers are recorded (with the exception of number 10). Since the left column is headed by 2 the next number would be 3. In the right column, the first number under 9 would be 1. This procedure is followed until all columns are completed. The finished tournament is:

1-10	2-9	3-8	4-7	5-6
2-10	3-1	4-9	5-8	6-7
3-10	4-2	5-1	6-9	7-8
4-10	5-3	6-2	7-1	8-9
5-10	6-4	7-3	8-2	9-1
6-10	7-5	8-4	9-3	1-2
7-10	8-6	9-5	1-4	2-3
8-10	9-7	1-6	2-5	3-4
9-10	1-8	2-7	3-6	4-5

The games should be played by starting with 1-10 and playing across each series from left to right. That is, combinations 1-10, 2-9, 3-8, 4-7, 5-6 would constitute the first round of play.

Partial round robins

Of course, the round-robin tournament will not meet all purposes. There are times when the large number of teams or the nature of the sport will make the round-robin type unfeasible. For example, in horseshoe pitching team competition we have found that about six regularly scheduled contests for each team is about as many as can be successfully conducted.

Let us suppose that the entries totaled 11 teams. If they were to be divided into two divisions, one of six teams and one of five, for a round-robin tournament, the teams in one division would play five games each while the teams in the other only four. Naturally this isn't a satisfactory arrangement.

The problem may be solved by any one of several methods, two of which will be described. The first suggestion is to place all 11 teams into a single tournament, each team playing six games.

Begin by drawing up three columns of numbers 1 to 11. The next step is to complete the number combinations in the left hand column, starting at the top with number 2 and working down to 1 in the bottom position. To complete the next column of combinations start with 3 and work down to 2. The next column will be started with 4 and ended with 3. The completed combinations will be:

1-2	1-3	1-4
2-3	2-4	2-5
3-4	3-5	3-6
4-5	4-6	4-7
5-6	5-7	5-8
6-7	6-8	6-9
7-8	7-9	7-10
8-9	8-10	8-11
9-10	9-11	9-1
10-11	10-1	10-2
11-1	11-2	11-3

A partial sequence of play may be secured as follows: Starting at the top of the left hand column and working down, pick out the alternate combinations—1-2, 3-4, 5-6, 7-8, 9-10, and 11-1. The remaining combinations, i. e. every alternate combination starting with 2-3 and working down, constitute the second round of games. The third and fourth rounds are worked out in the same manner with the third column as a base.

The center column does not follow a logical sequence and the fifth and sixth rounds cannot be arranged by merely selecting the alternate combinations. Hence the last two rounds must be arranged by dividing the column in such a way that no team (with one exception) plays more than once in each round. Since there are an odd number of teams, one of them will have to appear twice in one of the rounds. The most logical choice is the number 1 team. The center column can then be arranged as follows: 1-3, 2-4, 5-7, 6-8, 9-11, and 10-1 in one round, and 3-5, 4-6, 7-9, 8-10, and 11-2 in the other.

If eight games are desired for each team, there will be four columns of combinations. The first and third columns will follow a logical sequence, the second and fourth will not. If ten games are desired, five columns are used. The first, third and fifth columns will follow a logical sequence, while the second and fourth will not. Much time will be saved if a logical sequence of games is worked out and filed for future use. It will be found that this plan is only workable for an even number

of games, but can be used for any number of teams.

In the "partial" round-robin schedule the problem of an even number of teams playing either an odd or an even number of games is satisfactorily accomplished by using the first mentioned round-robin tournament for an even number of teams and "cutting off" the tournament when the desired number of rounds are completed. For example, a partial ten-team round-robin with each team playing five games may be arranged as follows:

1-10	1-9	1-8	1-7	1-6
2-9	10-8	9-7	8-6	7-5
3-8	2-7	10-6	9-5	8-4
4-7	3-6	2-5	10-4	9-3
5-6	4-5	3-4	2-3	10-2

This plan cannot, of course, be used for an odd number of teams.



Tennis Strokes

(Continued from page 10)

of wonderful use as a forcing weapon, either in putting the ball away from the backcourt or paving the way for a position at the net. On the other hand, it is a difficult shot to control. There is not nearly as great a margin of safety with the flat shot as with the overspin drive.

Of the three types of drives, I suggest that the overspin be first mastered. When this is attained, the player should go after the flat stroke. As the overspin is safer, I suggest its use on most of the shots. When the opportunity arises for a placement, use the flat stroke.

Two shots which I often use from the ground are the drop shot and the lob. The former is a short chop stroke designed to drop the ball just over the net for the purpose of drawing an opponent to the net, or winning a point when he is too far back to reach it. The lob is made with the same stance as the drive but consists of hitting the ball into the air over the head of an adversary stationed at the net.

These shots are of advantage because they enable a player to run his opponent back and forth in the court more easily than with the drives, which are primarily used to cause side to side running. After a player has sufficient feel of racket and balance to drive the ground strokes, he is usually quite able to acquire the drop shot and lob.

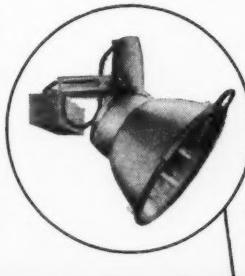
Some players are able to get fair results with poorly made strokes. However these players are the ones that can't quite get to the top.



WE OFFER YOU EXPERIENCE

If you're planning to light your field or modernize the present installation you'll want to benefit from General Electric's experience in lighting more than 400 athletic fields.

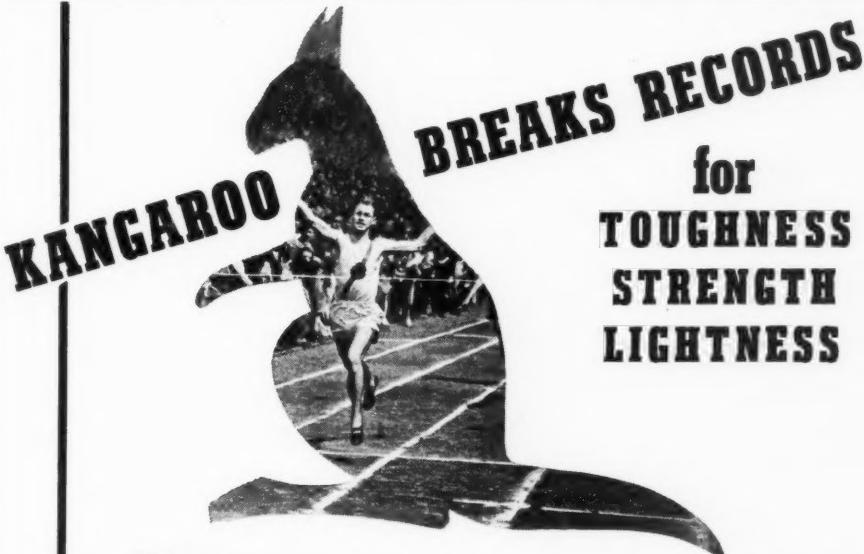
The G-E distributor or sales office nearest you can supply the equipment you need, and any one of our many lighting specialists will be glad to give you suggestions that other cities have found to be invaluable. Or write General Electric, Schenectady, N. Y.



A NEW FLOODLIGHT FOR SPORTS-FIELD LIGHTING

The Type L-68 is a new, low-cost, spun-aluminum floodlight designed specially for sports-field floodlighting and does an outstanding job. Easy servicing is assured by three distinct but related features—vertical adjustment of 240 degrees, slide-type door glass, and resetting ring. Ask for a copy of GEA-3317.

GENERAL  **ELECTRIC**

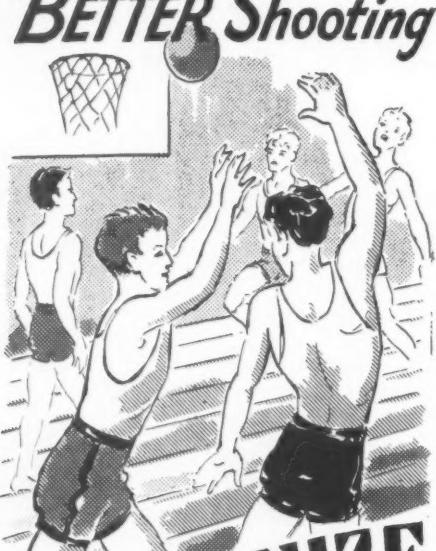


for
TOUGHNESS
STRENGTH
LIGHTNESS

WHETHER a boy is a star, or just a member of the squad, he needs foot safety to bring out the best that is in him. And when he is out for a sport in which supple leather footwear is essential (track, football, basketball, baseball), footwear of genuine Kangaroo leather is what he should be supplied with. You will find this leather featherlight, tough as rhinoceros hide and soft and pliable as kid! 17% stronger than any other leather, Kangaroo is absolutely safe and 14% lighter at any given strength than the next best leather.

KANGAROO
TANNED IN America

Surer Footing means BETTER Shooting



KAYSANIZE YOUR FLOORS

- INCREASES FLOOR LIFE
- PERMANENT FINISH
- EASY TO APPLY
- EASY TO CLEAN
- ECONOMICAL
- DOES NOT CRACK OR MAR



Not only a long-wearing floor finish but an ideal playing surface for your teams. KAYSAN dries with a velvet-smooth surface that permits a player to make sudden stops and quick turns, and provides the sure footing that means more accurate shooting.

KAYSAN is economical too—it penetrates the wood fibers, binds them into a tough hard mass that resists wear. And with all its advantages—KAYSAN is easily applied. Send the coupon today for Free Demonstration Kit.

AN OLD FAITHFUL PRODUCT
THE AMERICAN CRAYON COMPANY
861-961 HAYES AVENUE SAN DUSKY, OHIO
NEW YORK CHICAGO SAN FRANCISCO DALLAS

Free Demonstration Kit!

Prove the advantages of KAYSAN to yourself. Mail the coupon for FREE demonstration kit today.

The American Crayon Company Dept. K4, Sandusky, Ohio Please send me postpaid	<input type="checkbox"/> One gallon KAYSAN at \$3.00
	<input type="checkbox"/> Sample Kit of KAYSAN
Name	Title
School	
Address	
City	State

MAIL THIS COUPON

New Books on the Sportshelf

HOW TO TIE FLIES. By E. C. Gregg. Pp. 83. Illustrated. New York: A. S. Barnes & Co. \$1.

GONE are the days when our fishermen used to lure their prey with a freshly excavated member of the annelida family. Today no angler with an ounce of pride would dream of such a thing. Our neoteric fisherman employs more machiavellian tactics to hook his victim. He uses man-made bait: wet flies, dry flies, nymphs, bass flies, feather streamers or floating bugs, depending upon the fish he is after.

In *How to Tie Flies*, E. C. Gregg, authority on the subject, shows you how to make flies in your own home just like our professional fly tiers. In the first part of the book, the tools, hooks and methods used in fly tying are described and illustrated. Then step by step the author tells you how to make all the flies that were mentioned in the preceding paragraph. He concludes his discussion with standard dressings for 334 flies.

The text lives up to the best traditions of the Barnes Dollar Sports Library. The material is splendidly illustrated and projected in simple, easy-to-grasp terms.

BARNES DOLLAR LIBRARY: *Roping, Riding, Archery. Illustrated—photographs and drawings. New York: A. S. Barnes & Co. \$1 each.*

WHAT "New Books" column goes by without mention of at least one new addition to the dollar sports family. This month there are three, swelling the series to thirteen.

In *Riding*, Colonel J. J. Boniface, retired U. S. Cavalry, outlines the fruits of his 47 years of experience in the saddle. Although even the most gifted horseman or horsewoman can't read this book without learning something, it is aimed primarily for the beginner. The author presents the essential and most interesting points which must be learned and mastered.

In simple but authoritative terms, Colonel Boniface describes the initial training of horse and rider and the various ways of riding; which include riding at the walk, trot, lope, canter, gallop, and run. Once the fundamentals have been mastered, he shows you how to ride on the open range, at artificial gaits, over jumps, on bucking horses, and the elements of rough riding. He concludes his text with chapters on playing polo, endurance riding and questions and answers for the new rider.

Roping by Bernard S. Mason, is the famous camping man's contribution to the Dollar Library. Originally it appeared as a section of the author's *Primitive and Pioneer Sports* (1937, \$2.50). A good craftsman, Mr. Mason organizes his book in admirable fashion. First, he familiarizes the reader

with the parts of the lariat and the terms applied to the various sections of a spinning rope and catch-rope. He then describes the various rope-spinning tricks in their two general categories—flat spins and vertical spins. He rounds out the text with trick knots with a lariat, lariat throwing and roping exhibitions and contests.

Natalie Reichart and Gilman Keasey's *Archery* is a revised edition. Since its initial appearance in 1936, there has been a vast growth in the sport and naturally, an improvement in the manufacture of fine tackle. In the revised edition, the authors have included new material to bring the book up to the minute.

STANDARDS FOR TESTING BEGINNING SWIMMING. By Dr. Thomas K. Cureton. Pp. 185. Illustrated—tables. New York: Association Press. \$2.25.

THOMAS K. CURETON is practically a household name in the aquatic world. His book, *How to Teach Swimming and Diving*, is now a standard tool for everyone who teaches swimming.

His latest study is a comprehensive analysis of swimming ability and the measuring of it. He points out that in order to strengthen and develop the trend toward a recognition of higher standards for teaching and testing beginning swimming, there must be systematic study of the standards for such a progressive testing program.

In his book, he takes all the possible material on the beginning level and gradually through logical analysis, experimentation, and item analysis determines the specific characteristics, or standards, of the items.

From the data have been formulated three batteries of progressive tests for meeting the needs of short, middle-length and full courses of progressive testing. The focus is primarily centered on the selection of 25 beginning skill items and their standardization.

The book is not so much for the coach of varsity teams as it is for the instructor in charge of physical education swimming classes.

OFFICIAL SPORTS LIBRARY FOR WOMEN: *Badminton, Individual Sports, Recreational Games and Sports. Illustrated—photographs and drawings. New York: A. S. Barnes & Co. 25c each.*

THREE excellent six by five-inch, paper-bound books contain the official playing rules for 1940-41, numerous articles on techniques, teaching and organization, large charts on rules or techniques for bulletin board purposes, and other helpful information.

Individual Sports, edited by Margaret Fitch Newport, covers archery, tennis, riding, and golf. *Recreational Games and Sports* is co-edited by Lucia Ernst and A. Irene Horner. It contains an enormous number of games and sports for recreational programs, and also presents the rules for track and field.

The Badminton Guide has the unique distinction of being the first guide prepared through the cooperative efforts of Canadian and American women interested in this activity. Since the rules remain unchanged from year to year, this particular book will not be published again for five years.

New Film

PLAY BALL, AMERICA! A free-loan sound movie presented by the National Baseball League.

WHY is Paul Derringer's curve ball so effective? How do mouth signals help Tony Cuccinello team up with his shortstop? Is Joe Medwick's end grip favored by all long distance hitters? Does Gabby Hartnett give the same target to all pitchers?

All these questions and others are answered in the National League's 1940 film, *Play Ball, America!* Featuring an all-star cast without Don Ameche or a tap dancer, the film takes you on a delightful thirty-minute tour with some of the greatest baseball players in the land.

Such senior loop stars as Bucky Walters, Ernie Lombardi, Billy Herman, Pepper Martin, Arky Vaughn, and Dolf Camilli, besides those already mentioned, are seen pitching, fielding, batting, running bases, and demonstrating a host of the inside tricks that you see only on a big league diamond.

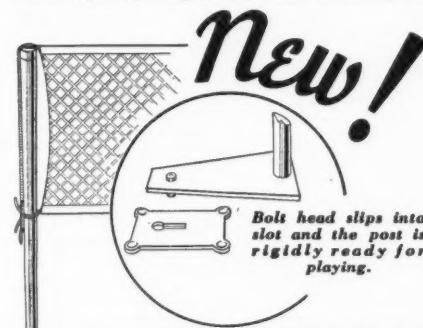
Filmed under the expert eye of Ethan Allen, who, after playing twelve years in the big time, now holds an important position in the National League Film Bureau, the film is without question the most informative and entertaining baseball movie ever produced. The subject matter has been selected shrewdly and unfolds as smoothly as any movie that comes out of Hollywood.

The beauty of it all is that the film costs nothing to rent! It is available on 16 mm film (one 1200-foot reel) and 35 mm film (two 2000-foot reels) to schools, churches and organizations that can provide sound projectors. The only obligation is express charges both ways.

There are several ways of obtaining it. You may write to your local club office if you live in or near a National League city; to Ethan Allen, National League Film Bureau, 30 Rockefeller Plaza, New York, if you live in an Eastern state north of Virginia; or to Burton Holmes Films, Inc., 7510 North Ashland Ave., Chicago, if you live in territory not mentioned.

For your COURTS and TRACK...

Spring is just around the corner. . . . The J. E. Porter Corporation, world's largest manufacturers of gymnasium, playground and swim pool equipment, invites you to investigate its complete line of money-saving posts, reels, nets and markers for your tennis, badminton and volley ball courts and everything for your track and field . . . and swimming pool.



Bolt head slips into slot and the post is rigidly ready for playing.

OFFICIAL TOURNAMENT BADMINTON POSTS

for Indoor or Outdoor Use

NO ROPES! No guys! No bulky bases! Only posts of kind on market! Newly designed and manufactured in accordance with specifications prepared by Tournament Committee of American Badminton Association. One-piece steel pipe welded to $\frac{1}{4}$ -inch steel plate, complete with attachment plate. Quickly put up and taken down. Easily rigged. Cannot break or wear out. Low-priced.

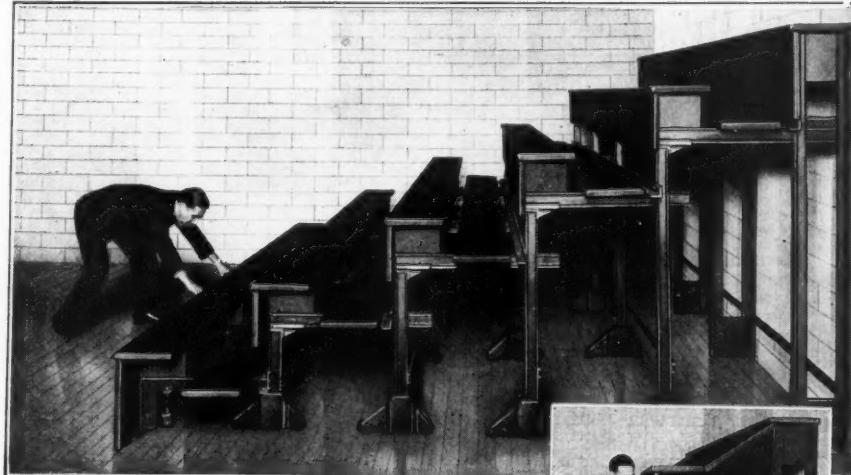
Write for Our New Circulars on Court, Track and Pool Items

ADDRESS DEPT. SC-4

THE J.E. PORTER CORPORATION OTTAWA ILLINOIS

Manufacturers of the famous "Louden," "Chicago" and "Spalding" Lines of Gymnasium, Swimming Pool and Playground Equipment

MEDART Telescopic GYM SEATS



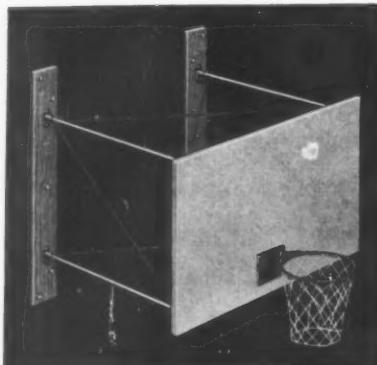
Safe to use and safe to operate. . . . Employs the modern telescopic principle of operation. . . . Occupies minimum floor area when "nested" thus freeing valuable floor space for class use. . . . Easily installed in existing buildings as well as in new gymnasiums. . . . One hundred per cent "Medart" built by the oldest manufacturer of Gymnasium Apparatus, Basketball Backstops, Lockers, Lock-erobes, Playground Apparatus, and Pool Equipment.

Write for Catalogs



FRED MEDART MANUFACTURING CO.
3540 DE KALB ST. ST. LOUIS, MO.

AMERICAN BASKET BALL BACKSTOPS



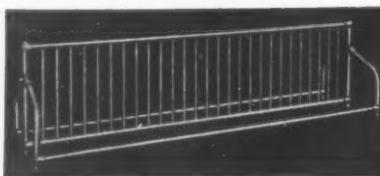
AMERICAN WALL-BRACED BACKSTOP
Ideal For Official or Practice Use . . . Extremely Economical.

The American Line of Basket Ball Backstops Conforms Strictly to Official Regulations Embodying Superior Features in Construction Which Insure Outstanding Performance and Rugged Durability

★ We "Tailor" AMERICAN Backstops To Your Exact Requirements
American's Line of Backstops Is Designed for ready adaptability to all structural conditions. Finer materials, better workmanship and Superior Construction assure users years of perfect service. Write for Special Folder, today.



AMERICAN FOOT BATHS
Prevent and Cure Athlete's Foot with AMERICAN Foot Baths and Hypochlorite. There is no better prophylaxis. Write for descriptive literature.



AMERICAN BICYCLE RACKS
American Approved Bicycle Racks will solve your troublesome bicycle parking problems. We'll gladly send you full information upon request.

Our 1940 Playground and Swimming Pool Equipment Catalogs are just off the press. Send for your copy, now.

AMERICAN
PLAYGROUND DEVICE CO.
ANDERSON INDIANA

From the States

(Continued from page 39)

Van Houten, Hansell's great junior forward, broke the individual scoring mark by making 44 points in a single game, to surpass the standard of 35 points, and rang up 137 points in four games to break the former mark of 91.

Hansell's four victories in the final meet, after battling through the sectional tourneys, in which 525 sextets competed, gave them a season's mark of 31 triumphs, one defeat and two ties. Waterville's speed and lightning attack, featured by great one-handed shooting from the corner, turned back favorite after favorite.

Hansell featured a rushing defense and a hard driving offense built around Van Houten, a 5 ft. 7 in. pivot-post player. With Dorothy Crawford, a husky forward, pitching a hard pass to her, Van Houten would swing off the pivot either right or left, even though guarded by two and sometimes three players. In the backcourt, Rosella Richtsmeier, a fleet guard, broke up enemy sallies and guarded girls six inches taller with ease. The committee that picks the most valuable player in the tourney was deadlocked between Van Houten and Richtsmeier and duplicate prizes were awarded.

All but one team in the meet featured the set pivot-post attack. Two clubs, Wiota and Numa, featured clever screening and pickoffs with the pivot girl setting up screens and the two front girls cross-checking for one another. So well coached were the clubs that no boys' tourney ever saw so many players who could pass or shoot with either hand. Both Numa and Wiota had 12 players and all made their setups either right or left handed.

Center of attention was Dorothy Wirds of Iowa Falls, who, with a 32 point a game average during the season, was advertised as Iowa's point-a-minute girl. She lived up to that until Richtsmeier and her mates guarded her and held her to 14 points.

FRANK BRODY,
Des Moines, Ia.

New Jersey

Fast break popular

MORE through fight and doggedness than finesse, Stanley Griffin's East Orange High School five bowled over several of the best tournament teams ever turned out in the Garden State and won the championship by nosing out heretofore unbeaten West New York, 39-38, in the most sensational game of the state tournament.

The losers, with a starting five that averaged 6 ft. 1 in. and an unbeaten skein stretching over 24 games, had been an odds-on choice to defend the crown they won last year. East Orange had lost three games during

the course of the season, but in the tournament games would not be denied.

While East Orange won the Group 4 titles, Rutherford, coached by Eddie Tryon of Colgate fame, defeated Bound Brook in the Group 3 competition, 42-33. Wildwood defeated Bogota in Group 2, 42-18; while in the Group 2 Prep School Division, Good Counsel of Newark defeated Camden Catholic in another very thrilling game.

Man-to-man defense with a fast breaking offense was the popular mode of play. A lot of good teams still depended on the zone defense and the fast break. The leading exponents of the zone-play styles were the New Brunswick and Weehawken schools. Both, however, fell victims to the man-to-man defense and fast breaking teams during the tourney. Lenny Burns' West New York team was one of the few beautifully developed combinations that could work the ball in for close lay-up shots. Long distance shooting predominated; nearly every team in the tournament had one and often two exceptional shots.

CHARLES J. SCHNEIDER,
New Jersey H. S. Coaches Assn.,
Newark, N. J.

Kentucky

Bullfrogs croak Tomcats

HAZEL GREEN'S "Bullfrogs," a team that entered every game as an underdog, is the new interscholastic basketball champion of the state by virtue of a sensational 35 to 29 victory over the favored Ashland Tomcats, former state and national champions.

The team barely escaped elimination in its district when it defeated London 25 to 24, and had a tight squeeze in the region when it eliminated Highland 29 to 27. In the state finals they trailed Ashland at the half by 9 to 19 and after three minutes of the third quarter were behind 23 to 11. At this point, the Bullfrogs thrilled the capacity crowd with one of the greatest up-hill battles in tournament history by scoring 24 points while holding Ashland to just 6.

Both finalists used the zone defense, but Hazel Green used the man-to-man as well. This versatility was largely responsible for the last half rally. Coach Clarence Wyatt had his team shift to a man-to-man at the start of the last half and finally, late in the final quarter, switched to an all-court man-to-man. This strategy marked the turning point in the game.

Hazel Green used both a fast and slow break with special emphasis on rebound work. The team averaged well over six feet, one of the tallest teams ever to win the title. Ashland, also a tall team, employed the fast break with marked success all season.

Athletic Injuries

FOR those injuries which require a heat-retaining, decongestive and pain-relieving dressing, use

Antiphlogistine

*Sample to Coaches, Trainers
and Athletic Directors*

THE DENVER CHEMICAL MANUFACTURING CO.

167 Varick St., New York

Failing in this, they used a long shot and follow game.

Only two of the 16 teams employed the slow break, set offense which was so popular a few years ago. Seven teams used the zone defense with one also able to employ a man-to-man. Six of the eight quarter finalists used the zone. Three of the four semi-finalists and both finalists did likewise.

The one-hand shot was very popular, especially on the run. Forwards used it while cutting across at the free-throw area, and also from the corners. Guards used it from the free-throw area after a fake and dribble. With so many big teams the games were somewhat rougher than usual. Inez won 34 straight games before dropping the semi-final tilt to Hazel Green, who won 16 and lost 9 during the regular season.

W. J. "BLUE" FOSTER,
Kentucky H. S. Coaches Assn.,
Newport, Ky.

Illinois

Attendance soars

FOR the eighth straight year, attendance figures soared at the various basketball tournaments sponsored by the state High School Athletic Association. The rate of increase over the tournaments of 1939 was approximately fifteen percent. The sectional tournaments (series immediately preceding the state finals) were especially well attended. In nearly all of them, hundreds of spectators were turned away.

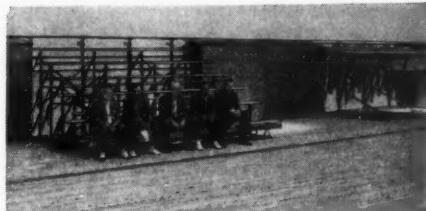
There are many reasons for the increased popularity of the game. Better floors have resulted in a more attractive game. Players have become increasingly skillful in the use of both one-hand and two-hand tries and the game is filled with rapid action and skillful maneuvers. The more accurate molded type basketball has also increased proficiency in dribbling and in shooting.

The state final tournament series produced some interesting situations. The tournament plan is such that teams which lose the final game of the regional tournament are permitted to play in the sectional tournaments along with regional tournament winners. This year there were two sectional tournaments where the final game was between the two schools which had participated in the regional finals and where the outcome was reversed.

At the Highland sectional, Wood River won from Granite City in the regional finals and Granite City won from Wood River in the sectional finals. Granite City represented the territory in the state finals. The same thing happened to Centralia and Salem. Salem reversed the regional results and won from Centralia in the sectional finals.

Blue Island High School sponsored a tournament during March for the lightweight teams of the Chicago and

Why waste space at \$5.00 per square foot?



Save with UNIVERSAL

■ The average value of gymnasium floor space approximates \$5.00 per square foot. Every foot made available for class or practice use means a saving to you. Universal gymnasium stands fold compactly against the wall when not in use . . . open smoothly and quickly to supply a super-safe, comfortable bleacher on five minutes' notice. Universal stands are custom made to meet your individual need. Let us help you plan.

*Write today for your copy
of our informative bulletin!*

UNIVERSAL BLEACHER CO.

606 S. NEIL ST. CHAMPAIGN, ILLINOIS



What a book! 16 pages crammed with golfing tips, by Craig Wood, famous professional. Shows how to play each wood and iron, how to blast out of sand, how to chip dead to the pin, and putt 'em in! 28 movie stills by Craig, himself, illustrate stance, grip, back swing, down swing, follow through. There is a special lesson on timing. Get your free copy now. Just clip and mail the coupon.

MAIL COUPON TODAY!

Dunlop Tire & Rubber Corp., Dept. 71
500 Fifth Ave., New York City
Send me copy of "How to Play Golf" by Craig Wood.

Name _____

Address _____

City _____ State _____

DUNLOP

STARTING BLOCKS



Bresnahan Starting Blocks (Pat. 2144962)

1. Metal Base
2. Rubber Face (Detachable)
3. Five Adjustments
4. Compact (5" x 10")

Price \$2.75

See your dealer or write direct to

G. T. BRESNAHAN
IOWA CITY, IA.

... TEAM WORK!

You'll find 100% team work at The Empire—where every service clicks to make your visit comfortable and happy. 700 spotless rooms with many at \$2.50 single, \$3.50 for two, with private bath. Served by 11 transit lines to all New York. Delicious "training" meals in the Empire Restaurants. Ideal headquarters for athletic teams on tour. Send for booklet "C."

HOTEL EMPIRE
BROADWAY AT 63d ST., NEW YORK

"At the Gateway to Times Square"

Edw. B. Bell, General Manager

NO-GERM CHECKING & LOCKER BASKETS

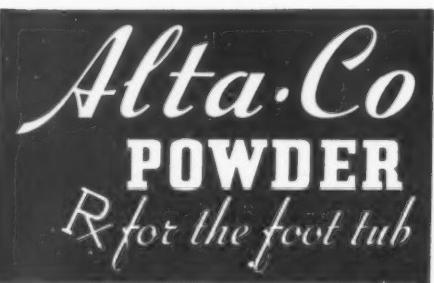
Woven and Welded • Low Prices — Assorted sizes and styles, all built for heavy service. Also special hanger baskets to take entire wardrobe. Write for 6 page folder SC.

American Wire Form Co.
275-279 Grant Ave., Jersey City, N.J.



FREE PROSPECTUS

ATHLETE'S FOOT, its character and control: that's the subject of this complete prospectus. Yours for the asking. Send a card to: The C. B. DOLGE Company, Westport, Connecticut.



 The
PENNSYLVANIA
STATE COLLEGE

SUMMER SESSIONS

★INTER-SESSION
June 11 to June 28

★MAIN SESSION
July 1 to August 9

★POST-SESSION
August 12 to August 30

Offering abundant opportunities for professional advancement through courses which may be credited toward advanced and baccalaureate degrees in:

HEALTH EDUCATION

RECREATION

PHYSICAL EDUCATION

ATHLETICS

Opportunity for sound study under nationally known staff of instructors, combined with good entertainment. Living accommodations at reasonable rates. Moderate expenses. For illustrated announcement address

DIRECTOR OF SUMMER SESSIONS
Room 236 Education Building

THE PENNSYLVANIA STATE
COLLEGE

State College, Pennsylvania

From the States

(Continued from preceding page)

suburban high schools. Sixteen teams were entered, and played with modified backboards as recommended by the National Basketball Committee for experimental purposes. The boards had an area of approximately one-half of the present size boards. The overall width was 54 inches and the overall depth was 36 inches. The top of the board was the arc of a circle.

Statistics were collected on the effect they had on actual play. These statistics plus those gathered in other parts of the country will have a bearing on action relative to the proposal to legalize a smaller streamlined backboard.

One of the noticeable features of play in the sectional and state final tournaments was the great use which was made of the four-foot end space behind the backboard. Some of the most skillful teams repeatedly tried for goal from behind the plane of the backboard and many of these were successful. The use of the end space also relieved some of the congestion directly in front of the basket. Statistics were collected for 1000 tournament games to determine the effect of the four-foot end space on such matters as the number of times the ball went out of bounds over the end line. On the courts where the four-foot end space was available, there was a reduction of approximately ten percent of the number of times the ball went out of bounds at the end.

H. V. PORTER,
Illinois H. S. Athletic Assn.,
Chicago, Ill.

Washington

Seagulls scourge of tourney

WITH a 42-22 affair constituting their "closest" call, Everett High's Seagulls flapped through the 17th annual state tournament with the greatest of ease. It was Everett's first title in 13 attempts. On two previous occasions, they were able to reach the finals but could not go all the way. This year they came to the tournament riding the crest of a 25-game winning wave, the unanimous choice of the experts.

In winning the diadem, the Seagulls set three records: a 64-19 victory over Oakville not only established a new high for a single game but was also the greatest margin of victory in tourney annals; a total of 200 points in four games constituted the third mark.

Oakville was the first Class B school to reach the finals since 1936. Its captain was a full-blooded Chehalis Indian, who won all-state honors on the basis of his play in the semi-final game in which Oakville upset Hoquiam, defending titleholders.

Despite Everett's obvious superiority over the field, attendance rec-

FOR ALL
SPORTS USES

GUINAND GALLETS and SECURITY

TIMEERS

are the World's Standard of Excellence

Moving ever upward in
Quality and Dependability

FREE Catalog
on request

JULES RACINE & CO.

20 WEST 47th ST., NEW YORK

DON BUDGE

. . . will be teaching you the strokes and tactics that have made him the world's outstanding player —as soon as you get

BUDGE ON TENNIS

By J. DONALD BUDGE

Here is the book that gives you the secret of the deadly ground strokes, sizzling volleys, crashing overheads, and canny court strategy which make up Budge's flawless game.

180 pp. 64 Action
Photographs, \$2.00

For complete information, check master coupon on page 56

PRENTICE-HALL, INC.
70 Fifth Ave. New York City

ords went the way of all records. The four-day tourney was attended by over 25,000 spectators, with 8,000 on hand for the kill. Sixteen schools competed and 26 games were played.

No new legislation was passed by the state athletic association at an open meeting on the final day but committees were appointed, (1) to investigate the feasibility of holding both a Class A and a Class B tourney, (2) to redistrict the state in order to include one league not participating in state competition, and (3) to investigate the possibility of a state officials' organization. A proposal was made to use six officials instead of four in the next tourney but no official action was taken.

HAROLD SHAW,
Puyallup, Wash.

Wisconsin

B fives dominate tourney

THE state basketball tournament was the first one-class meet conducted in Wisconsin in eight years. Despite the most adverse weather encountered in 25 years, the meet attracted enough spectators to defray all expenses and return a profit to both the competing teams and the state association.

That Wisconsin high school basketball is no longer dominated by the larger schools is evidenced by the fact that only four of the so-called Class A schools won in the 16 regional events. Two of these survived the first round and both lost out the second day. The meet was strictly a fight between what formerly were classed as B schools.

Close games and upsets marked the tournament. The final game between Shawano and Marshfield was won by the former, 23-22. Consolation honors went to Madison-Central which won a 21-19 decision over Delavan.

The first state wrestling meet was held in Appleton on March 29 and 30, with about 15 schools represented. Boxing, which is also making rapid strides as a high school sport, has three four-team meets on the spring sports calendar.

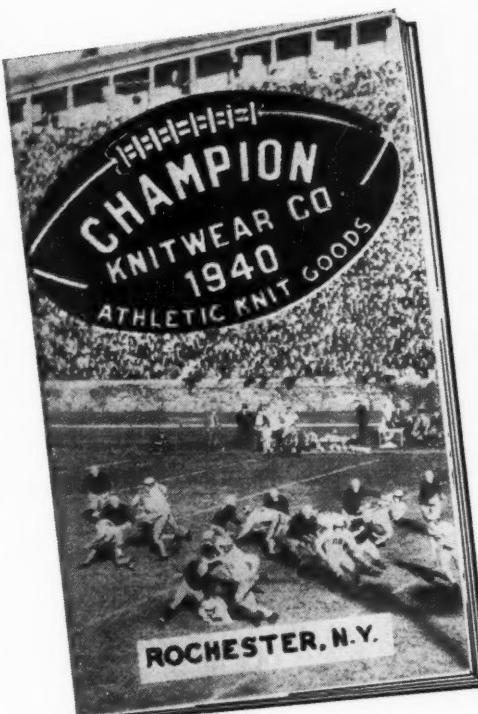
Baseball, however, still remains the outstanding spring activity. Over 70 percent of the schools in this state promote the sport on an interscholastic basis. The success many schools have had with one-day, four-team meets in the past has prompted most of these schools to re-schedule these events for the coming season.

P. F. NEVERMAN,
Wisconsin Intersch. Ath. Assn.,
Marinette, Wis.

Connecticut

Bassick lifts crown

BASSICK HIGH of Bridgeport, pre-season and pre-tourney favorite and a really great team, coached by Harry Lyons, annexed the state's Class A crown by right of a 35-25 conquest over a giant Stratford five. Led by Captain Joe Vancisin, one of



WRITE FOR SPECIAL TRACK FOLDER

-MR. COACH-

THE CHAMPION CATALOG

F O R 1 9 4 0

Is Your Buying Guide. Check
Following Highlights

FOOTBALL

(Buy Now for Fall Delivery)

Game Jerseys in Durene & Rayon
Practice Jerseys—"T" Shirts*
Sox and Supporters—Hoods, etc.

TRACK

(Prompt Delivery for Spring)
Uniforms—Sweat Outfits

PHYSICAL ED.

Gym Suits with Champacraft Designs

*Write for Samples.

CHAMPION KNITWEAR CO.
Rochester, N. Y.

Please send me your new catalog—

Name
Address
.....

SCHOLASTIC COACH MASTER COUPON

After checking carefully items desired, this coupon may be sent directly to Scholastic Coach advertising department, 250 East 43rd Street, New York, N. Y., from which point the advertiser will be notified of the requests.

AMERICAN CRAYON CO. DENVER CHEMICAL CO. P. GOLDSMITH & SONS
 Sample, Kaysan Sample Antiphlogistine Catalog

AMERICAN PLAY-GROUND DEVICE CO. C. B. DOLGE CO. GULF OIL CORP.
Information on Booklet, C-03 and Foot tub service deal
 Foot Baths Tennis Nets Catalog, Sport Timers
 Basketball Backstops Bicycle Racks

Booklet, "Sani-Soil-Set for Treating Play-grounds"

BECTON, DICKINSON DUCOMMUN CO. HILLERICH & BRADSBY
New Ace Manual Catalog, Sport Timers
 Sample, Ace Adherent

Booklet, "Famous Sluggers of 1939"
 Softball rules books
 Catalog

DUNLOP TIRE & RUBBER CORP. HILLYARD SALES CO.
CORP. Booklet, "Stroking with Vinnie Richards"
 Tennis Booklet, "Swinging Thru," by Craig Wood

Golf Booklet, "Swinging Thru," by Craig Wood

DURENE ASSOC. HODGMAN RUBBER CO.
 List of Manufacturers Using "Durene" Sample Swatches of Parkas
 Booklet, "Don't Be Dopey" How Many?

Order one for each student EVERWEAR MFG. CO. HUNTINGTON LABS.
 Catalog Information on Seal-O-San Floors

GENERAL ELECTRIC KANGAROO ASSOC.
 Information, Floodlighting Booklet

CONTINENTAL MARTY GILMAN KEN-WEL SPORTING
CAR-NA-VAR Catalog on football dummies GOODS
 Booklet, "What to Do About Your Floors" Catalog

ON PAGE 56 OPPOSITE THIS PAGE ARE
OTHER LISTINGS AND FORM FOR SIGNATURE

the brightest schoolboy prospects in years, Bassick looked like champions all the way except in the semi-final Windham tilt, where it took a last minute shot by a substitute to save their hide. The champions used a man-to-man defense and often followed their opponents into the latter's backcourt. Spectators were impressed with their cool, deliberate offense featuring screen plays around pivots. They missed many times under the hoop but never stopped throwing them up.

Stratford, a team of six footers, was the darkhorse of the tournament. Although they hadn't been figured even to get into the tournament, the giants turned back seeded Bristol and then Weaver with ridiculous ease. They used a 2-3 and sometimes a 2-1-2 zone which was effective against all but Bassick. They broke quickly from the zone and then deployed in a double pivot. The pivot men would often shoot off either hand or pass out to the sharpshooting guards.

The Class B games, which were held on alternate days with the A, were just as thrilling. Lyman Hall swamped Middletown 45-18 in the

finals. The Class C-D title was annexed by Ellsworth High of South Windsor.

The tournament attendance records topped the 1939 figures by 3,000. At both the semi-final and final games, more than 5,000 fans jammed the arena. Hundreds were turned away.

THOMAS J. DEGNAN

New England

Nutmeggers triumph

GOING on to Portland, Maine, for the New England high school championship games, Connecticut's Bassick High team continued its triumphal march by beating Pawtucket, R. I., in an overtime "sudden death" period, 39-37. This brought Connecticut its eighth straight New England championship, and a total of ten out of the sixteen. (One of these, the 1939 championship, won by Bassick, was forfeited because of an ineligible player.)

In the New England series, Bassick drubbed Berlin, N. H., 45-20, and Cathedral of Burlington, Vt., 42-26, while Pawtucket was beating New

Bedford, Mass., 48-40 and Cheverus of Portland, 27-25. The final game was a real thriller. Pawtucket, which entered the fray an underdog, led all the way into the last moments of the fourth quarter. The score was tied as Pawtucket lost two sterling players on fouls. In the overtime, a Bassick substitute, McPadden, dropped in the winning goal from a difficult angle.

Portland folks like their basketball, and full house crowds of 4,000 were on hand for each of the three sessions, a new high.

WALTER B. SPENCER,
New Haven, Conn.

Michigan

Peninsula victors

MICHIGAN continued to sponsor two big sectional tournaments rather than one statewide championship. A four-class tournament was held for Upper Peninsula schools and another for teams in the Lower Peninsula.

The Upper winners were: Class B, Marquette; C, Crystal Falls; and D, Hermansville. In the territory down under, Flint-Northern copped Class A honors; Traverse City, B; Williams-ton, C; and Weidman, D.

A national resume will appear in Scholastic Coach next month.

SCHOLASTIC COACH MASTER COUPON

(See page 55 for other listings)

KNOX GELATINE

- Booklet, "Building Stamina"

MATTHEWS ABDO-GARD

- Booklet

G. McARTHUR & SONS

- Free School Towel Plan

FRED MEDART MFG. CO.

- Equipment Catalogs
- Catalog on Goal-Hi

MENNEN CO.

- Information on Athlete's Foot

PAGE STEEL AND WIRE

- Folder, Tennis Nets

PENNSYLVANIA SALT MFG. CO.

- Booklet "Perchloron"
- Sample

PETERSEN & CO.

- Catalog on Gym Mats, Blocking Pads and Baseball Bases

J. E. PORTER CORP.

- Catalogs on:
- Gym Equipment
- Swim Pool Equipment
- Track Equipment
- Net Game Equipment

PRENTICE-HALL

- Information, Sport Books

JULES RACINE

- New Sports Timer Catalog

RAWLINGS SPORTING GOODS

- Catalog

JOHN T. RIDDELL

- Catalog

SEAMLESS RUBBER CO.

- Information

SIMPSON CO.

- Information, Charley Pad Bandage

SOLVAY SALES

- Booklet, "To End Dust"

L. SONNENBORN & SONS

- Information on Lignophol Wood Finish

STAY WHITE

- Sample

TOURNAMENT ENTRY

- Golf Boys Girls
- Tennis Boys Girls

U. S. RUBBER CO.

- Information, Footwear

UNIVERSAL BLEACHERS

- Catalog

VESTAL CHEMICAL CO.

- Basketball Record Book, "How to Make Stars"

VOIT RUBBER CO.

- New Folder on Basketballs and Balls for all Sports

WEST DISINFECTING CO.

- Booklet, Westochlor

WESTINGHOUSE ELECTRIC

- Information, Floodlighting

WILSON SPORTING GOODS

- Booklet, "Tom Stow's Stroke Developer and System"
- Catalog

WINTARK CO.

- Information, Basketballs, Playground Balls

W. F. YOUNG CO.

- Muscle chart & sample

NAME

POSITION

(Principal, coach, athletic director, physical director)

Please print name and address

SCHOOL

ENROLLMENT

CITY

STATE

No coupon honored unless position is stated

April, 1940



UNI-GOAL

NOT A NEW GAME

The UNI-GOAL is a new goal originated and introduced by us to fulfill the need for a substantial and practical outdoor basketball goal at a low cost to schools. It is a complete game unit and games may be played under the regular official basketball rules. NO NEW GAME IS NEEDED.

Made for permanent outdoor use, also in a portable model for in or outdoor use.



For further particulars, write
SCHUTT MANUFACTURING COMPANY
P. O. Box 88
Litchfield, Illinois

THE COACH'S BOOK LIST

BASKETBALL

- Better Basketball*, by Forrest C. Allen, \$4.
100 Drills for Teaching Basketball Fundamentals, by Blair Gullion, \$1.
Basketball Offensive Fundamentals Analyzed, by Blair Gullion, \$2.
Winning Basketball, by Nat Holman, \$2.
Basketball, by Dr. H. C. Carlson, \$2.
Basketball Methods, by John W. Bunn, \$3.25.
Modern Basketball, by Jourdet and Hashagen, \$2.25.
Basketball, by Charles Murphy, \$1.
Basketball, by Clair Bee, \$1.
Lowry's Basketball Score and Scout Book, 65c.
Sayger Illustrated Series
Pittsburgh's Offense, by H. C. Carlson, \$1.
Indiana's Offense, by Everett Dean, \$1.
Ohio State Offense, by Harold Olsen, \$1.
Butler Offense, by "Tony" Hinkle, \$1.50.
Basketball's Assistant Coach, by Hinkle and Sayger, \$3.

BASEBALL

- Baseball Coaching Aids*, by H. S. DeGroat, \$2.75.
Major League Baseball, by Ethan Allen, \$3.
Baseball, by Jack Coombs, \$2.75.
Baseball, by Dan Jessee, \$1.

LAWN TENNIS UP TO DATE

An 80-page tennis manual, magazine page size, containing pictures and articles on the personalities and play of our ranking tennis players. Each player's style of play and stroke production is discussed. The manual contains answers to questionnaires sent to the leading players covering all points of tennis play. Bound with heavy magazine cover stock. PRICE, 50c postpaid.

OTHER SPORTS

- Sports as Taught and Played at West Point*, by 17 Coaches, \$2.
The Coaching of Soccer, by Hubert Coyer, \$2.
Fundamentals of Foil Fencing, by Joseph Vince, \$1.10 (postpaid).
Primer of Figure Skating, by Maribel Vinson, \$2.75.
Figure Skating as a Hobby, by Diane Cummings, \$2.
Skating, by Putnam and Parkinson, \$1.
Skiing, by Walter Prager, \$1.
The Tumbling Manual, by LaPorte and Renner, \$3.
The Teaching of Stunts and Tumbling, by B. and D. Cotteral, \$3.
Active Games and Contests, by Mitchell and Mason, \$3.
Primitive and Pioneer Sports, by B. S. Mason, \$2.50.
The New Trainers Bible, by Dr. S. E. Bilik, \$2.50.
Physical Education Class and Record Book, by Hugo Fischer, 75c.

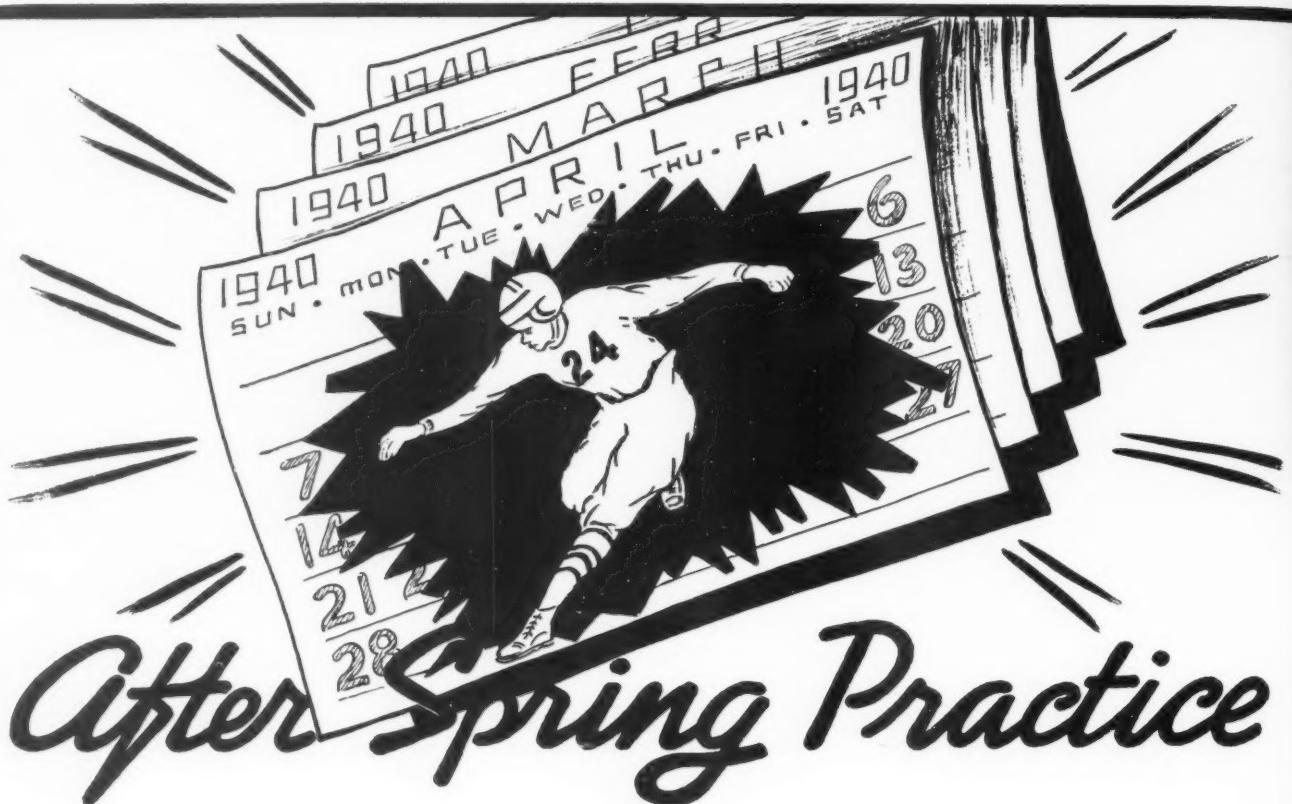
- Hockey*, by Vaughan and York, \$3.50.
Safety in Athletics, by Lloyd, Deaver and Eastwood, \$3.25.
Athletics in Education, by Williams and Hughes, \$3.50.
Wrestling, by E. C. Gallagher, \$1.
Wrestling (Intercollegiate and Olympic), by Henry A. Stone, \$3.
Modern Wrestling, by Hugo Otopalik, \$2.
Wrestling Wall Chart, by Hugo Otopalik, \$1.50.
The Complete Swimmer, by Ulen and Larcom, \$3.
American Red Cross Series: First Aid; Water Safety; Swimming and Diving, 60c each.
How to Teach Swimming and Diving, by Thomas K. Cureton, \$3.
Swimming, by Victor E. Lawson, \$1.50.
Modern Methods in Archery, by Reichart and Keasey, \$1.

All books sent postpaid upon receipt of check, money order, or school order form.

SCHOLASTIC COACH BOOKSHOP

250 EAST 43 STREET

NEW YORK, N. Y.



After Spring Practice

When your players check in their spring practice togs you can store them away just as they were turned in—soiled and smelly with perspiration—or you can adopt the modern, sanitary method of having them thoroughly sterilized and reconditioned by a long, established and experienced reconditioning company like the IVORY SYSTEM.

Occasionally, our roadmen encounter some individual who says that he doesn't believe in having Athletic Equipment cleaned and reconditioned, but the vast majority of clear thinking Coaches and Athletic Directors want their boys to have clean and sanitary uniforms the next season.

Aside from the sanitary factor—reconditioning prolongs the life of Athletic Equipment, and enables the well managed Athletic Department to get the last ounce of value out of their Athletic Purchases. You are especially well repaid for your reconditioning investment when you intrust your equipment to the care of the oldest, largest and most progressive concern of its kind in the country.

The Ivory System

Reconditioners of Athletic Equipment

PEABODY.... MASSACHUSETTS